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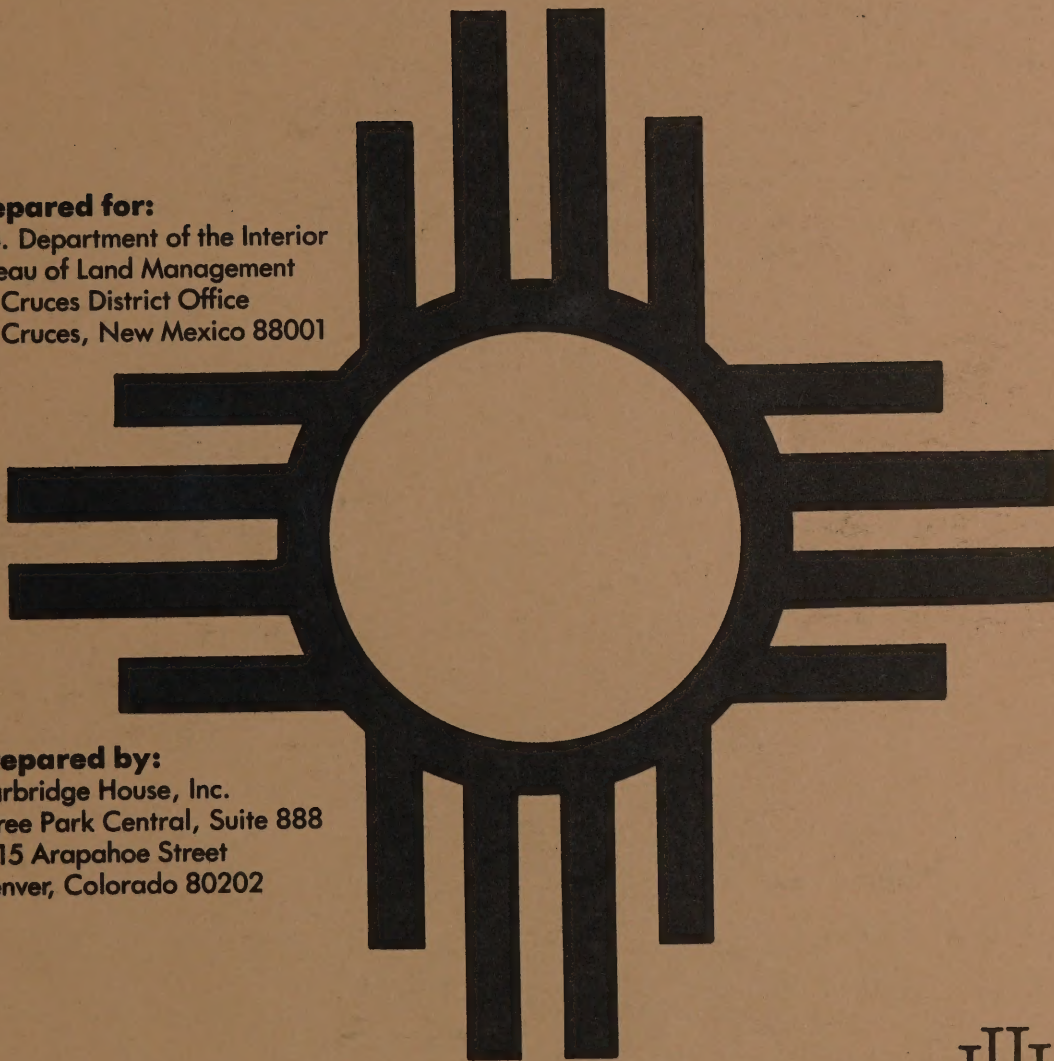
SOUTHWESTERN NEW MEXICO SOCIAL-ECONOMIC PROFILE

Prepared for:

U.S. Department of the Interior
Bureau of Land Management
Las Cruces District Office
Las Cruces, New Mexico 88001

Prepared by:

Harbridge House, Inc.
Three Park Central, Suite 888
1515 Arapahoe Street
Denver, Colorado 80202



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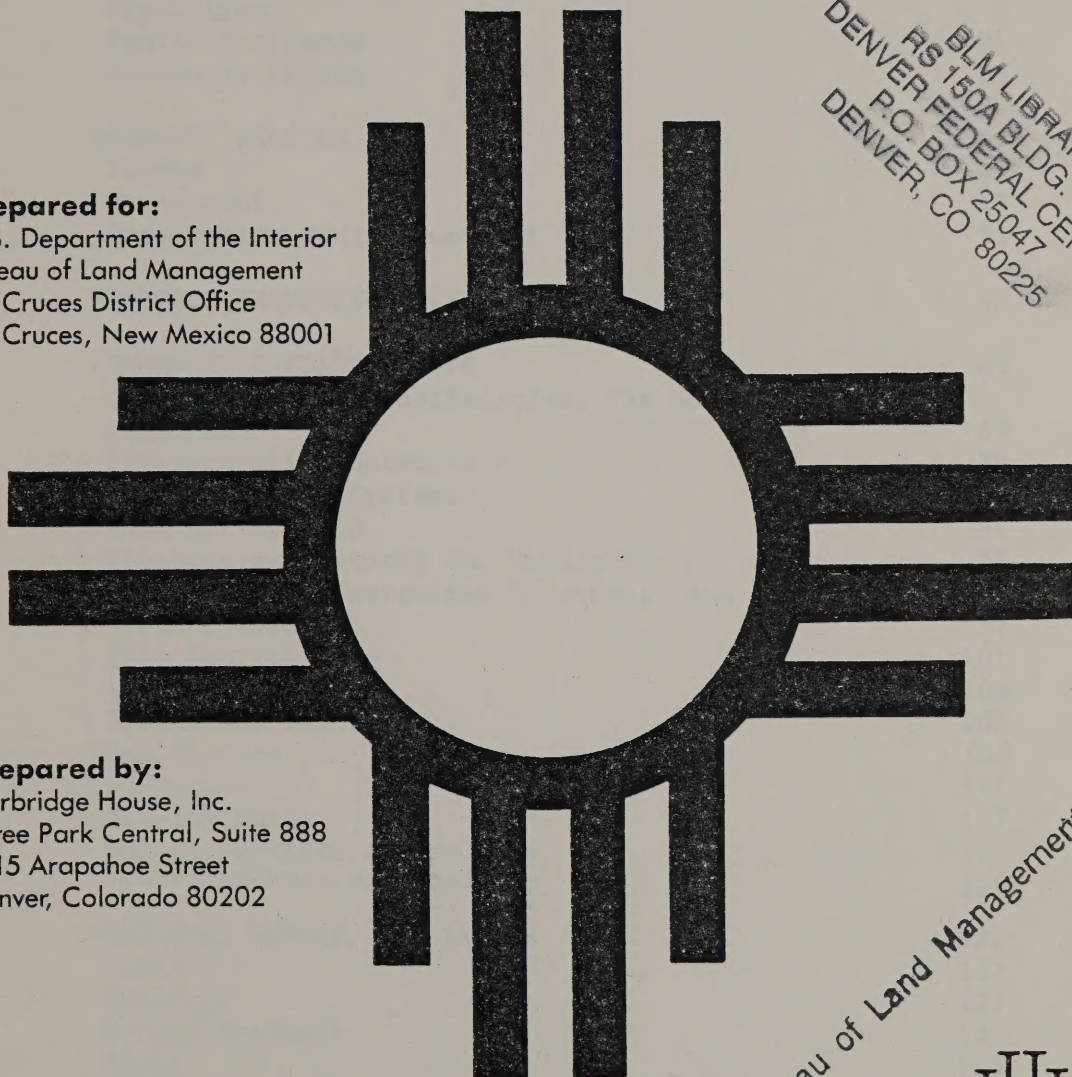
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CONSTITUTIONAL HISTORY
OF THE UNITED STATES

THE
FEDERAL
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IN THE
UNITED STATES

THE
FEDERAL
SYSTEM
OF GOVERNMENT
IN THE
UNITED STATES

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TABLE 1

Year

1960-1969

1970-1979

1	1960-1969	1970-1979
2	1960-1969	1970-1979
3	1960-1969	1970-1979
4	1960-1969	1970-1979
5	1960-1969	1970-1979
6	1960-1969	1970-1979
7	1960-1969	1970-1979
8	1960-1969	1970-1979
9	1960-1969	1970-1979
10	1960-1969	1970-1979
11	1960-1969	1970-1979
12	1960-1969	1970-1979
13	1960-1969	1970-1979
14	1960-1969	1970-1979
15	1960-1969	1970-1979
16	1960-1969	1970-1979
17	1960-1969	1970-1979
18	1960-1969	1970-1979
19	1960-1969	1970-1979
20	1960-1969	1970-1979
21	1960-1969	1970-1979
22	1960-1969	1970-1979
23	1960-1969	1970-1979
24	1960-1969	1970-1979
25	1960-1969	1970-1979
26	1960-1969	1970-1979
27	1960-1969	1970-1979
28	1960-1969	1970-1979
29	1960-1969	1970-1979
30	1960-1969	1970-1979
31	1960-1969	1970-1979
32	1960-1969	1970-1979
33	1960-1969	1970-1979
34	1960-1969	1970-1979
35	1960-1969	1970-1979
36	1960-1969	1970-1979
37	1960-1969	1970-1979
38	1960-1969	1970-1979
39	1960-1969	1970-1979
40	1960-1969	1970-1979
41	1960-1969	1970-1979
42	1960-1969	1970-1979
43	1960-1969	1970-1979
44	1960-1969	1970-1979
45	1960-1969	1970-1979
46	1960-1969	1970-1979
47	1960-1969	1970-1979
48	1960-1969	1970-1979
49	1960-1969	1970-1979
50	1960-1969	1970-1979
51	1960-1969	1970-1979
52	1960-1969	1970-1979
53	1960-1969	1970-1979
54	1960-1969	1970-1979
55	1960-1969	1970-1979
56	1960-1969	1970-1979
57	1960-1969	1970-1979
58	1960-1969	1970-1979
59	1960-1969	1970-1979
60	1960-1969	1970-1979
61	1960-1969	1970-1979
62	1960-1969	1970-1979
63	1960-1969	1970-1979
64	1960-1969	1970-1979
65	1960-1969	1970-1979
66	1960-1969	1970-1979
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68	1960-1969	1970-1979
69	1960-1969	1970-1979
70	1960-1969	1970-1979
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72	1960-1969	1970-1979
73	1960-1969	1970-1979
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79	1960-1969	1970-1979
80	1960-1969	1970-1979
81	1960-1969	1970-1979
82	1960-1969	1970-1979
83	1960-1969	1970-1979
84	1960-1969	1970-1979
85	1960-1969	1970-1979
86	1960-1969	1970-1979
87	1960-1969	1970-1979
88	1960-1969	1970-1979
89	1960-1969	1970-1979
90	1960-1969	1970-1979
91	1960-1969	1970-1979
92	1960-1969	1970-1979
93	1960-1969	1970-1979
94	1960-1969	1970-1979
95	1960-1969	1970-1979
96	1960-1969	1970-1979
97	1960-1969	1970-1979
98	1960-1969	1970-1979
99	1960-1969	1970-1979
100	1960-1969	1970-1979

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Table 1

Year	Value	Percentage
1960	100	100
1961	105	105
1962	110	110
1963	115	115
1964	120	120
1965	125	125
1966	130	130
1967	135	135
1968	140	140
1969	145	145
1970	150	150
1971	155	155
1972	160	160
1973	165	165
1974	170	170
1975	175	175
1976	180	180
1977	185	185
1978	190	190
1979	195	195
1980	200	200
1981	205	205
1982	210	210
1983	215	215
1984	220	220
1985	225	225
1986	230	230
1987	235	235
1988	240	240
1989	245	245
1990	250	250
1991	255	255
1992	260	260
1993	265	265
1994	270	270
1995	275	275
1996	280	280
1997	285	285
1998	290	290
1999	295	295
2000	300	300
2001	305	305
2002	310	310
2003	315	315
2004	320	320
2005	325	325
2006	330	330
2007	335	335
2008	340	340
2009	345	345
2010	350	350
2011	355	355
2012	360	360
2013	365	365
2014	370	370
2015	375	375
2016	380	380
2017	385	385
2018	390	390
2019	395	395
2020	400	400

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Table 1

Year	Value	Unit
1970	10.0	1000
1971	10.5	1000
1972	11.0	1000
1973	11.5	1000
1974	12.0	1000
1975	12.5	1000
1976	13.0	1000
1977	13.5	1000
1978	14.0	1000
1979	14.5	1000
1980	15.0	1000
1981	15.5	1000
1982	16.0	1000
1983	16.5	1000
1984	17.0	1000
1985	17.5	1000
1986	18.0	1000
1987	18.5	1000
1988	19.0	1000
1989	19.5	1000
1990	20.0	1000
1991	20.5	1000
1992	21.0	1000
1993	21.5	1000
1994	22.0	1000
1995	22.5	1000
1996	23.0	1000
1997	23.5	1000
1998	24.0	1000
1999	24.5	1000
2000	25.0	1000
2001	25.5	1000
2002	26.0	1000
2003	26.5	1000
2004	27.0	1000
2005	27.5	1000
2006	28.0	1000
2007	28.5	1000
2008	29.0	1000
2009	29.5	1000
2010	30.0	1000
2011	30.5	1000
2012	31.0	1000
2013	31.5	1000
2014	32.0	1000
2015	32.5	1000
2016	33.0	1000
2017	33.5	1000
2018	34.0	1000
2019	34.5	1000
2020	35.0	1000

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Date	Description	Amount
1911	Jan 1 Balance	100.00
1911	Jan 10 Cash	50.00
1911	Jan 20 Cash	25.00
1911	Jan 30 Cash	15.00
1911	Feb 10 Cash	10.00
1911	Feb 20 Cash	5.00
1911	Feb 30 Cash	5.00
1911	Mar 10 Cash	10.00
1911	Mar 20 Cash	5.00
1911	Mar 30 Cash	5.00
1911	Apr 10 Cash	10.00
1911	Apr 20 Cash	5.00
1911	Apr 30 Cash	5.00
1911	May 10 Cash	10.00
1911	May 20 Cash	5.00
1911	May 30 Cash	5.00
1911	Jun 10 Cash	10.00
1911	Jun 20 Cash	5.00
1911	Jun 30 Cash	5.00
1911	Jul 10 Cash	10.00
1911	Jul 20 Cash	5.00
1911	Jul 30 Cash	5.00
1911	Aug 10 Cash	10.00
1911	Aug 20 Cash	5.00
1911	Aug 30 Cash	5.00
1911	Sep 10 Cash	10.00
1911	Sep 20 Cash	5.00
1911	Sep 30 Cash	5.00
1911	Oct 10 Cash	10.00
1911	Oct 20 Cash	5.00
1911	Oct 30 Cash	5.00
1911	Nov 10 Cash	10.00
1911	Nov 20 Cash	5.00
1911	Nov 30 Cash	5.00
1911	Dec 10 Cash	10.00
1911	Dec 20 Cash	5.00
1911	Dec 30 Cash	5.00
1911	Total	1000.00

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1.0 INTRODUCTION

The Social-Economic Profile (SEP) records, organizes and analyzes data of social and economic significance relating to resource uses and values. It is a preliminary component of the Bureau of Land Management's planning system and is intended to provide information for subsequent documents such as the Planning Area Analysis (PAA) and the Management Framework Plan (MFP). Public participation plans, resource activity planning, employee orientation and environmental analysis may also draw upon the SEP. The objective of the SEP is to insure that planning staff possess data identifying social and economic factors regarding perceptions and uses of public lands, elements of community infrastructure related to public lands, and BLM relationships with governments, groups and individuals concerned with public lands management.

This profile has been prepared for use generally in any planning efforts undertaken by the Las Cruces District Office and specifically in the writing of a grazing environmental statement (ES) for the Southern Rio Grande Planning Area. Therefore, subsequent sections refer to two geographic regions. The first comprises the six counties which lie wholly or almost entirely within the district: Dona Ana, Grant, Hidalgo, Luna, Otero, and Sierra. These six counties are commonly referred to in this SEP as the Social-Economic Profile Area (SEPA). The second geographic region referred to in subsequent sections consists of the portions of Dona Ana, Luna, Otero, and Sierra Counties which comprise the Southern Rio Grande Planning Area. In this SEP, this region is referred to as the Environmental Statement Area (ESA). Because comparatively little of Otero County is included in the planning area, data given for the ESA have actually been obtained from figures for Dona Ana, Luna, and Sierra Counties only.

The SEPA described above was defined for convenience in planning efforts undertaken by the Las Cruces District Office. Previous studies have chosen smaller areas of study. SEP's have been prepared for a "Sacramento SEPA," comprising Otero and Lincoln Counties, and for a "Southwestern SEPA," comprising Grant, Hidalgo, and Luna Counties. Such definitions of study areas reflect perceived needs of planners. This SEP is intended to provide data for one particular ES, as mentioned, but also to support other reports and ongoing planning, to the greatest extent possible. Data are generally displayed for six counties, individually and collectively, and for minor civil divisions as well, such as cities, towns and villages. With this level of detail, any given study area in the SEPA, such as the ESA, may be analyzed by abstraction of relevant information from text and tables.

In detailing socioeconomic conditions in the SEPA, basic demographic and economic information is presented for three years in the recent past, 1960, 1965, and 1970; for the most recent year for which data are generally available, 1976; and for three years into the future,

TABLE 1.0

LAND OWNERSHIP, SOUTHWESTERN NEW MEXICO SEPA AND NEW MEXICO, 1976

Land Ownership	<u>Dona Ana County</u>		<u>Grant County</u>		<u>Hidalgo County</u>		<u>Luna County</u>	
	<u>Acres</u>	<u>Percent of Total</u>	<u>Acres</u>	<u>Percent of Total</u>	<u>Acres</u>	<u>Percent of Total</u>	<u>Acres</u>	<u>Percent of Total</u>
Federal, Total	1,821,515	74.8	1,270,877	50.0	882,679	40.0	786,150	41.5
Bureau of Indian Affairs	0	0.0	22,000	0.9	0	0.0	0	0.0
Bureau of Land Management	1,151,044	47.3	385,575	15.2	805,459	36.5	783,534	41.4
Forest Service	0	0.0	844,384	33.2	77,222	3.5	0	0.0
Park Service	53,044	2.2	0	0.0	0	0.0	0	0.0
Department of Defense	486,267	20.0	5	0.0	0	0.0	2,081	0.1
Miscellaneous	131,160	5.4	18,913	0.7	0	0.0	535	0.0
State, Total	286,910	11.8	367,685	14.5	354,431	16.1	534,951	28.3
Tribal, Total	0	0.0	24,000	0.9	11,000	0.5	0	0.0
Private, Total	326,135	13.4	878,238	34.6	957,970	43.4	571,379	30.2
All, Total	2,434,560	100.0	2,540,800	100.0	2,206,080	100.0	1,892,480	100.0

Source: Information received from New Mexico Interstate Stream Commission, New Mexico Agricultural Experiment Station, and National Park Service.

TABLE 1.0 (Cont'd)

LAND OWNERSHIP, SOUTHWESTERN NEW MEXICO SEPA AND NEW MEXICO, 1976

Land Ownership	<u>Otero County</u>		<u>Sierra County</u>		<u>SEPA</u>		<u>New Mexico</u>	
	<u>Acres</u>	<u>Percent of Total</u>	<u>Acres</u>	<u>Percent of Total</u>	<u>Acres</u>	<u>Percent of Total</u>	<u>Acres</u>	<u>Percent of Total</u>
Federal, Total	2,886,626	67.9	1,830,310	67.8	9,478,159	59.2	26,735,431	34.3
Bureau of Indian Affairs	0	0.0	0	0.0	22,000	0.1	356,173	0.5
Bureau of Land Management	941,526	22.2	822,175	30.5	4,889,313	30.6	13,613,566	17.5
Forest Service	534,922	12.8	378,665	14.0	1,844,193	11.5	9,099,126	0.5
Park Service	92,291	2.2	0	0.0	145,335	0.9	296,602	0.4
Department of Defense	1,295,738	30.4	405,506	15.0	2,189,597	13.7	2,734,537	3.4
Miscellaneous	13,149	0.3	223,964	8.3	387,721	2.4	635,427	0.8
State, Total	449,908	10.6	361,195	13.4	2,355,080	14.7	9,413,017	12.1
Tribal, Total	460,255	10.8	0	0.0	495,255	3.0	7,348,563	9.4
Private, Total	451,531	10.7	508,655	18.8	3,693,908	23.1	34,369,229	44.2
All, Total	4,248,320	100.0	2,700,160	100.0	16,022,400	100.0	77,866,240	100.0

Source: Information received from New Mexico Interstate Stream Commission, New Mexico Agricultural Experiment Station, and National Park Service.

namely 1980, 1990, and 2000. In a few instances, like the assessment of housing conditions, 1970 Census information constitutes the most recent detailed data. Such exceptions to data presentation for a base year of 1976 are specially noted. In analyzing particular demographic and economic characteristics of the SEPA, and in describing the status of community infrastructure, data are given for 1976 only. Information regarding values, attitudes and life-styles in the SEPA was obtained from sources with many original dates, although for the ESA, Harbridge House field studies in the summer of 1978 are the primary source of data.

The SEPA comprises a largely consistent physiographic unit, consisting of the southern valley of the Rio Grande in New Mexico, and desert and mountain areas east and west of the river. Elevations in the valley range between 3,800 and 4,000 feet above sea level. Elevations in mountain areas range up to the more than 12,000 feet of the Sierra Blanca in Otero County. Temperatures vary with altitude, but fall generally between 30 and 85 degrees Fahrenheit. Vegetation ranges from pine forests at higher elevations to scrub brush in desert playas, and verdant cropland in irrigated farms. This natural environment is principally inhabited by two cultural groups, Hispanos and Anglos. The former first entered the region with the Chamuscado-Rodriguez expedition of 1581-82; the first Hispanic settlements were established by Juan de Oñate and his soldier colonists in 1598 (Wilson, 1975). In 1846, the SEPA became a part of the United States of America and subsequently was settled by migrants from other parts of the nation. Few descendants of the aboriginal Indian population live in the SEPA; the largest number of Indians inhabit the Mescalero Apache Indian Reservation in Otero County.

Communities throughout the SEPA have grown up in relationship with extensive federal and state landholdings. Public lands account for 59.2 percent of the total land area of the SEPA, while private lands represent less than a quarter of total acres, compared to 44.2 percent in New Mexico generally. As Table 1.0 shows, the United States of America is the largest land owner in the SEPA, accounting for 9,478,157 acres, or 59.2 percent of the land area: in Dona Ana, Otero and Sierra Counties, the federal government owns more than two out of every three acres. The Bureau of Land Management controls 51.7 percent of the federal acreage in the SEPA, 30.6 percent of the total land area of the six counties. The role which the BLM plays in the development of southwestern New Mexico is therefore considerable, and will grow as existing communities and resource industries expand from present locations. The sections which follow explore the relationships of present and projected social and economic conditions in the SEPA to public lands administered by the Bureau of Land Management.

TABLE 2.1

NUMBER OF INHABITANTS, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1960-1976

County	1960 ^a Population	Percent of SEPA Population	1965 ^a Population	Percent of SEPA Population	1970 Population	Percent of SEPA Population	1976 ^b Population	Percent of SEPA Population
Dona Ana	60,100	43.9	68,000	46.8	69,900	44.6	81,900	46.3
Grant	18,700	13.6	19,300	13.2	22,100	14.1	24,000	13.6
Hidalgo	5,000	3.6	5,300	3.6	4,700	3.0	6,000	3.4
Luna	9,800	7.2	10,500	7.2	11,700	7.5	14,600	8.2
Otero	37,000	27.0	35,700	24.5	41,300	26.2	41,600	23.5
Sierra	6,400	4.7	6,900	4.7	7,200	4.6	8,800	5.0
SEPA	137,000	100.0	145,700	100.0	156,900	100.0	176,900	100.0
New Mexico	954,700	696.9	1,012,000	694.6	1,018,100	648.9	1,168,400	660.5

Source: ^aUniversity of New Mexico, Bureau of Business and Economic Research, New Mexico Statistical Abstract, 1977.

^bNew Mexico Employment Security Commission, New Mexico Annual Planning Report, 1978.

TABLE 2.2

POPULATION GROWTH, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1960-1976

County	1950-1960 ^a Population Change	Average Annual Percent Change	1960-1965 ^a Population Change	Average Annual Percent Change	1965-1970 ^a Population Change	Average Annual Percent Change	1970-1976 ^b Population Change	Average Annual Percent Change
Dona Ana	20,500	4.3	7,900	2.5	1,900	0.5	12,000	3.2
Grant	(3,000)	(1.5)	600	0.6	2,800	2.8	1,900	1.4
Hidalgo	(100)	(0.2)	300	1.2	(600)	(2.4)	1,300	4.2
Luna	1,000	1.1	700	1.4	1,200	2.2	2,900	3.8
Otero	21,900	9.4	(1,300)	(0.7)	5,600	3.0	300	0.1
Sierra	(600)	(0.9)	500	1.5	300	0.9	1,600	3.4
SEPA	39,700	3.5	8,700	1.2	11,200	1.5	20,000	2.0
New Mexico	270,400	3.4	57,300	1.2	6,100	0.1	150,300	2.8

Sources: ^aU.S. Department of Commerce, Bureau of the Census, Census of Population: 1960-1970, New Mexico: Number of Inhabitants, 1962, 1973.

^bNew Mexico Employment Security Commission, New Mexico Annual Planning Report, 1978.

2.0 SOCIAL PROFILE

Approximately one-third of the population of the SEPA lives within the corporate limits of two municipalities, Alamogordo and Las Cruces. When residents of adjacent, unincorporated but urbanizing areas are also included, Alamogordo and Las Cruces together account for nearly 50 percent of the SEPA's total number of inhabitants. Both communities have grown since the end of World War II as centers of government research, military testing and higher education, although the growth of Alamogordo has slowed since the mid-sixties. The post-war demographic and economic development of the two cities has consequently differed from that of most of the SEPA, in which farming, ranching and mining still constitute the primary economic activities, and where populations have grown slowly, if at all. Exceptions to this regional pattern exist in scattered areas in the SEPA which have proven attractive to retirees. Retirement communities are found throughout the SEPA but are most common in Sierra County where Truth or Consequences is the center of a large resort-retirement district.

The following subsections detail the aggregate social characteristics of the six counties in the region and identify the disparate ethnic and cultural groups which live in the SEPA. The demographic analysis is based on available secondary materials, principally the U.S. Census, as updated from 1970 by federal and state agencies. The description of attitudes and values is derived in part from previous studies of communities in southwestern New Mexico and in part from special interviews with residents of the ESA conducted by Harbridge House in June 1978.

2.1 Population

In 1976, the population of the SEPA was estimated at 176,900, or 15.1 percent of the population of New Mexico. As shown in Table 2.1, Dona Ana County, with an estimated 81,900 residents, accounted for 46.3 percent of the inhabitants of the six-county area; Otero County represented an additional 23.5 percent of the population of the SEPA. The growth in the number of residents of southwestern New Mexico since 1960 is also shown in Table 2.1. Dona Ana County has had an increasing percentage of the regional population in the period 1960-1976. The number of its inhabitants increased by nearly one-third in 16 years, to nearly one out of every two persons living in the SEPA.

Population growth rates for the six counties in the SEPA are shown in Table 2.2. Dona Ana County has experienced both the largest and most consistent rates of population increase since 1960, with the number of residents growing by approximately 2.0 percent annually. At this rate, the county's population would double every 35 years. At least since 1965, Luna County has exceeded Dona Ana County in its rate of growth. The number of its inhabitants rose from 9,800 in 1960 to

TABLE 2.3

NATURAL INCREASE AND MIGRATION PATTERNS, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1960-1976

<u>County</u>	<u>1960 Population</u>	<u>Natural Increase</u>	<u>Net Migration</u>	<u>1970 Population</u>	<u>Natural Increase</u>	<u>Net Migration</u>	<u>1976 Population</u>
Dona Ana	60,100	14,625	(4,825)	69,900	6,895	5,105	81,900
Grant	18,700	3,100	300	22,100	1,850	50	24,000
Hidalgo	5,000	840	(1,140)	4,700	430	870	6,000
Luna	9,800	1,830	70	11,700	800	2,100	14,600
Otero	37,000	8,195	(3,895)	41,300	4,490	(4,190)	41,600
Sierra	6,400	(280)	1,080	7,200	(355)	1,955	8,800
SEPA	137,000	28,310	(8,410)	156,900	14,110	5,890	176,900
New Mexico	954,700	184,870	(121,470)	1,018,100	80,800	69,500	1,168,400

Source: Derived from University of New Mexico, Bureau of Business and Economic Research, New Mexico Statistical Abstract, 1977.

TABLE 2.4

URBAN AND RURAL POPULATIONS, SOUTHWESTERN NEW MEXICO SEPA, 1960-1976

<u>County</u>	<u>1960 Population</u> ^b	<u>Percent Urban</u> ^a	<u>Percent Rural</u>	<u>1970 Population</u> ^b	<u>Percent Urban</u> ^a	<u>Percent Rural</u>	<u>1976 Population</u> ^c	<u>Percent Urban</u> ^a	<u>Percent Rural</u>
Dona Ana	60,100	49.3	50.7	69,900	54.2	45.7	81,900	49.8	50.2
Grant	18,700	37.3	62.7	22,100	35.1	64.9	24,000	38.8	61.2
Hidalgo	5,000	68.7	31.3	4,700	73.0	27.0	6,000	65.8	34.2
Luna	9,800	69.0	31.0	11,700	71.3	28.7	14,600	72.9	27.1
Otero	37,000	67.4	32.6	41,300	55.8	44.2	41,600	63.9	36.1
Sierra	6,400	66.7	33.3	7,200	64.7	35.3	8,800	62.0	38.0
SEPA	137,000	55.5	44.5	156,900	54.2	45.8	176,900	54.7	45.3
New Mexico	954,700	65.9	34.1	1,018,100	69.8	30.2	1,168,400	64.0	46.0

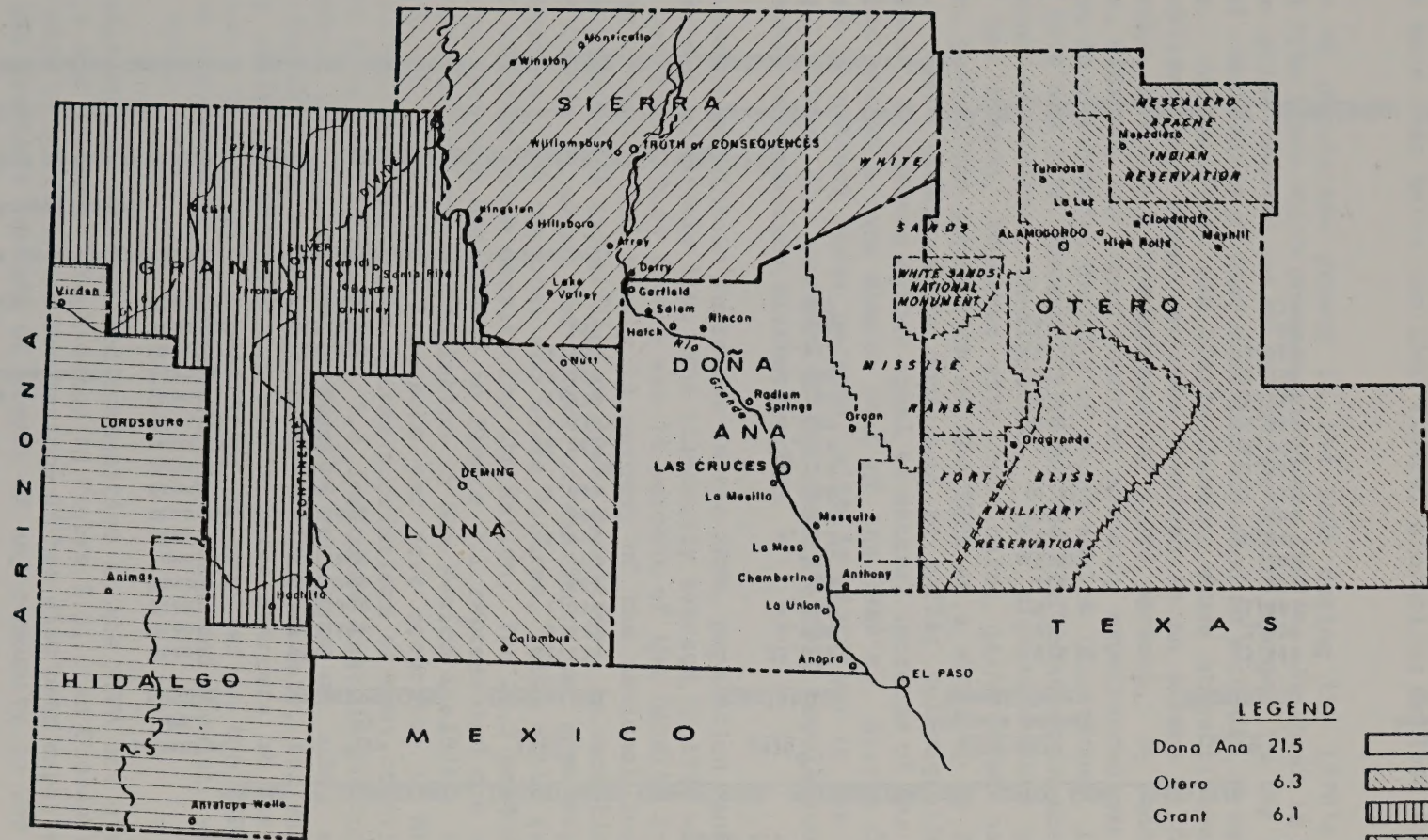
Note: ^aUrban populations defined as those of communities of 3,000 persons or more.

Sources: ^bU.S. Department of Commerce, Bureau of the Census, Federal State Cooperative Program, Current Population Reports. 1960-1970.

^cNew Mexico Employment Security Commission, New Mexico Annual Planning Report, 1978.

FIGURE 2.1

POPULATION DENSITIES
SOUTHWESTERN NEW MEXICO SEPA, 1976



Sources: University of New Mexico, Bureau of Business and Economic Research, New Mexico Statistical Abstract 1977.
New Mexico Employment Security Commission, New Mexico Annual Planning Report, 1978.

TABLE 2.5

NUMBER OF INHABITANTS, INCORPORATED COMMUNITIES, SOUTHWESTERN NEW MEXICO SEPA, 1960-1976

<u>Community</u>	<u>Location by County</u>	<u>Type by Incorporation^c</u>	<u>1960^d Population</u>	<u>1970^d Population</u>	<u>1960-1970 Average Annual Growth Rate</u>	<u>1976^e Population</u>	<u>1970-1976 Average Annual Growth Rate</u>
Alamogordo	Otero	City	21,723	23,035	0.6	23,575	0.4
Bayard	Grant	Village	2,327	2,908	2.3	2,907	0.0
Central	Grant	Village	1,075	1,864	5.7	1,883	0.2
Cloudcroft	Otero	Village	464	525	1.2	594	2.1
Columbus	Luna	Village	307	241	(2.4)	259	1.2
Deming	Luna	City	6,764	8,343	2.1	10,640	4.1
Hatch	Dona Ana	Village	888	867	0.2	898	0.6
Hurley	Grant	Town	1,851	1,796	(0.3)	1,626	(1.6)
La Mesilla	Dona Ana	Town	^a	1,713	^b	1,911	1.8
Las Cruces	Dona Ana	City	29,367	37,857	2.6	40,797	1.3
Lordsburg	Hidalgo	City	3,436	3,429	(0.2)	3,948	2.4
Silver City	Grant	Town	6,972	7,751	1.1	9,319	3.1
Truth or Consequences	Sierra	City	4,269	4,656	0.9	5,458	2.7
Tularosa	Otero	Village	3,200	2,851	(1.2)	3,018	1.0
Virden	Hidalgo	Village	135	151	1.1	190	3.9
Williamsburg	Sierra	Village	^a	367	^b	632	9.5

Note: ^a Not yet incorporated, reliable population data lacking.

^b Not applicable.

Source: ^c New Mexico Municipal League, Directory of Municipal Officials, 1977.

^d U.S. Department of Commerce, Bureau of the Census, Census of Population: 1960, 1970, New Mexico: Number of Inhabitants, 1962, 1973.

^e New Mexico Employment Security Commission, New Mexico Annual Planning Report, 1978.

14,500 in 1976. This gain equals 4,800 persons, or 49 percent, in 16 years. Were this growth to continue, Luna County's population in 1988 would be more than twice the 1960 figure, a doubling in less than 28 years.

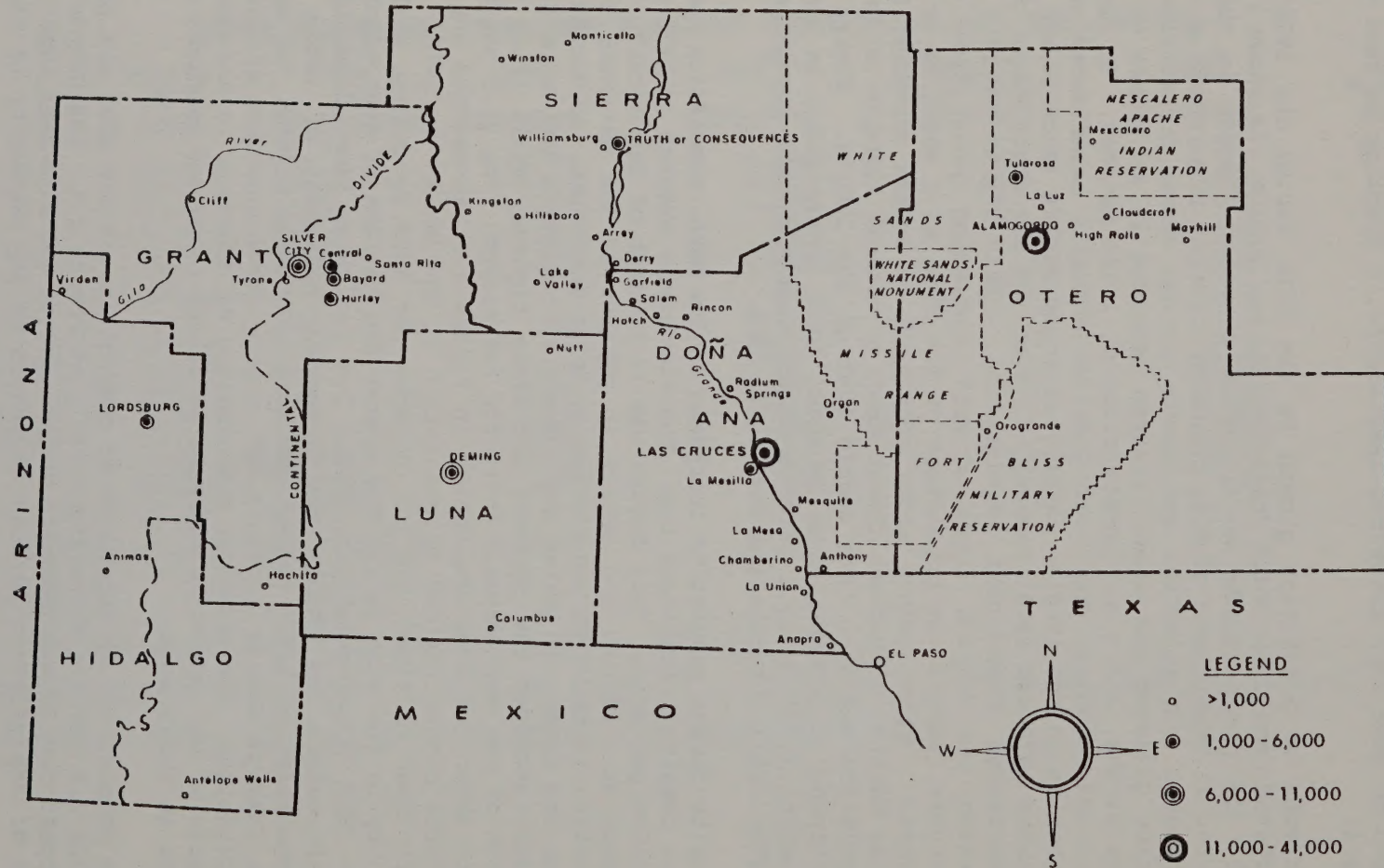
Patterns of population growth in the SEPA during the 1970's have differed from those which characterized the 1960's. As shown in Table 2.3, the prior decade was a period in which changes in the total number of inhabitants of most counties occurred as a result of natural increase. An exception was Sierra County, whose attractiveness to senior citizens and other retirees resulted in an excess of deaths over births, but a net in-migration of 1,080 persons. By contrast, Dona Ana, Hidalgo, and Otero Counties actually experienced net out-migration in the 1960's, chiefly of young adults (Zickefoose, 1977). Between 1970 and 1976, however, five of the six counties in the SEPA experienced significant in-migration. This migration into southwestern New Mexico, together with continuing gains from natural increase, pushed the population of the SEPA as a whole up by 20,000 persons. Otero County alone continued to suffer out-migration of young adults, in numbers almost equal to natural increase of the total population and at a rate double that of the 1960's. Sierra County continued to attract older persons, with in-migration in six years equaling 1,955 or 27.1 percent of the county's 1970 population, and deaths still outnumbering births, by 355.

Despite recent population increases in the SEPA, population densities have remained relatively low. The six-county average in 1976 was 7.1 persons per acre. This figure was 74 percent of the density for New Mexico as a whole, and barely 10 percent of the national average. Counties in the SEPA had similar or lower densities. An exception was Dona Ana County in which the number of residents per acre significantly exceeded the regional and state figures, while still falling short of the population density for the nation. The 21.5 persons per acre shown for Dona Ana County in Figure 2.1 represented one of the densest concentrations of population in New Mexico in 1976. It was more than 12 times the 1.7 persons per acre occurring in Hidalgo County in the same year. The sparse populations of most counties in the SEPA notwithstanding, Table 2.4 indicates that inhabitants of southwestern New Mexico are primarily residents of urban areas, communities of 3,000 persons or more. In Luna County, for example, the City of Deming accounts for nearly three-quarters of the total population. The relative urbanization of counties in the SEPA is a result of the extent of unpopulated desert range and mountain wilderness in rural areas.

The populations of incorporated communities in the SEPA are given in Table 2.5 and are shown graphically in Figure 2.2. Las Cruces is the largest city in southwestern New Mexico; it has also been experiencing one of the greatest periods of growth of any community in the SEPA,

FIGURE 2.2

POPULATION OF INCORPORATED COMMUNITIES
SOUTHWESTERN NEW MEXICO SEPA, 1976



Source: Harbridge House, Inc.

with an increase of 11,430 inhabitants since 1960. In addition, much of the recent increase in Dona Ana County's population has occurred in unincorporated areas adjacent to Las Cruces. Other fast-growing communities include Silver City in Grant County, Deming in Luna County, and Truth or Consequences in Sierra County. Alamogordo and Tularosa in Otero County have stagnated in the late 1960's and early 1970's, after growing rapidly in the 15 years after World War II. Likewise, three mining towns in Grant County--Bayard, Central and Hurley--grew little, if at all, between 1960 and 1976. Newly incorporated communities in the SEPA include La Mesilla, a suburb of Las Cruces, in Dona Ana County, and Williamsburg, a resort and retirement haven in Sierra County.

Age breakdowns of the population of the SEPA suggest ways in which Dona Ana and Sierra Counties differ from the other four counties in southwestern New Mexico, and from one another. Table 2.6 gives the number of inhabitants by age group for the six-county area while Table 2.7 gives the percentages of inhabitants represented by the same age groups. Tables 2.8 through 2.13 represent population pyramids for each county. These tables contrast the relative youth of Dona Ana County, in which 63.5 percent of the population was reported to be under the age of 30 in 1970, with the relative age of Sierra County, in which 43.4 percent of the population was reported to be over the age of 50 at the same census. Grant, Hidalgo, Luna and Sierra Counties had populations with age breakdowns in a range between those of Dona Ana and Sierra. While they had fewer young persons, particularly in the 20-29-year-old category, they also had fewer elderly residents. Tables 2.14 and 2.15 give age distributions for the SEPA as a whole and for the state of New Mexico.

Differences in the relative sizes of age groups reflect, in part, Dona Ana County's growth as a research and educational center, which has resulted in the in-migration of young families and students, and Sierra County's development as a retirement center, particularly in the vicinity of Truth or Consequences, Williamsburg and unincorporated areas like Caballo, Elephant Butte, and Hillsboro. Differences in the relative sizes of ethnic groups, however, reflect historical circumstances which predate patterns of growth since 1945. Table 2.16 gives the number of inhabitants of the SEPA by ethnic or racial group; Table 2.17 gives the percentages of total population, by county, corresponding to each group. As the table shows, the dominant group in southwestern New Mexico consists of Anglos, defined here as non-Spanish surnamed whites. Anglos represent 52 percent of the inhabitants. However, Hispanos constitute a large minority in the region, and in some specific areas a narrow plurality. Except on and near the Mescalero Apache Indian Reservation, other groups are not sizable.

Projections of population growth in the SEPA vary widely with each author and his assumptions. In Table 2.18, projected populations are

TABLE 2.6

NUMBER OF INHABITANTS, BY AGE GROUP, SOUTHWESTERN NEW MEXICO SEPA, 1970

County	Under 5 Years of Age ^a	5 to 17 Years of Age	18 to 21 Years of Age	22 to 44 Years of Age	45 to 64 Years of Age	Over 64 Years of Age	Total, All Ages
Dona Ana	6,920	21,320	5,450	22,720	9,785	3,705	69,900
Grant	2,210	6,300	1,350	6,365	4,130	1,745	22,100
Hidalgo	510	1,465	190	1,220	900	415	4,700
Luna	1,075	3,630	445	2,900	2,455	1,195	11,700
Otero	4,255	12,970	2,190	14,490	5,700	1,695	41,300
Sierra	495	1,550	195	1,455	1,730	1,775	7,200
SEPA	15,465	47,235	9,820	49,150	24,700	10,530	156,900
New Mexico	96,750	311,120	54,995	307,045	178,220	70,270	1,018,400

Sources: ^a Distributed according to breakdown contained in U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Population Characteristics, 1973.

^b Mid-year estimates by University of New Mexico, Bureau of Economic and Business Research.

TABLE 2.7

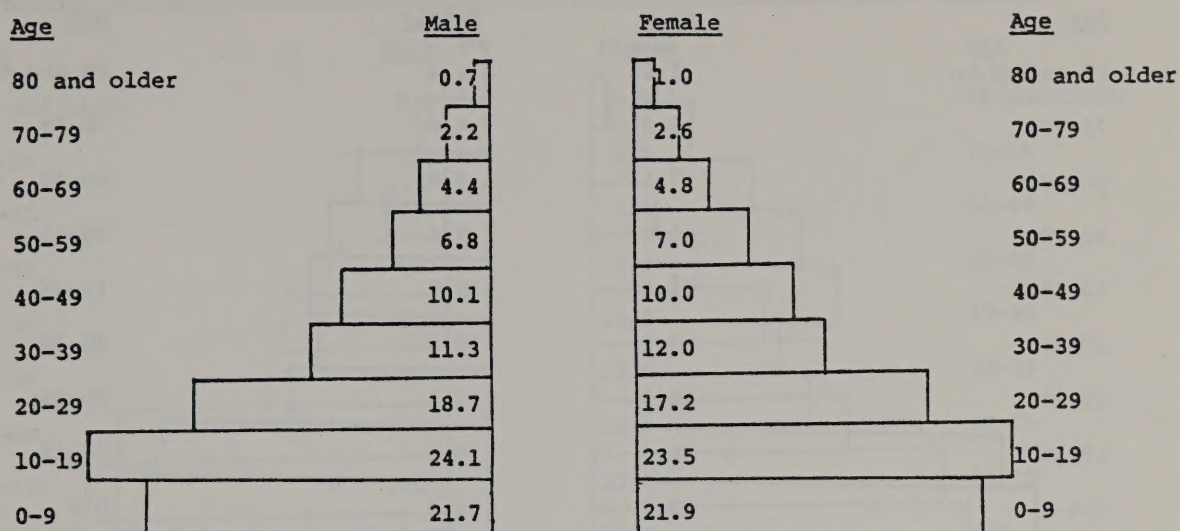
PERCENT OF INHABITANTS, BY AGE GROUP, SOUTHWESTERN NEW MEXICO SEPA, 1970

County	Under 5 Years of Age	5 to 17 Years of Age	18 to 21 Years of Age	22 to 44 Years of Age	45 to 64 Years of Age	Over 64 Years of Age	Total, All Ages
Dona Ana	9.9	30.5	7.8	32.5	14.0	5.3	100.0
Grant	10.0	28.5	6.1	28.8	18.7	7.9	100.0
Hidalgo	10.9	31.2	4.1	25.9	19.1	8.8	100.0
Luna	9.2	31.0	3.8	24.8	21.0	10.2	100.0
Otero	10.3	31.4	5.3	35.1	13.8	4.1	100.0
Sierra	6.9	21.5	2.7	20.2	24.0	24.7	100.0
SEPA	9.8	30.1	6.2	31.4	15.7	6.8	100.0
New Mexico	9.5	30.5	5.4	30.1	17.5	6.9	100.0

Source: U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Population Characteristics, 1973.

TABLE 2.8

PERCENT OF INHABITANTS BY AGE SHOWN IN POPULATION PYRAMID, DONA ANA COUNTY, 1970

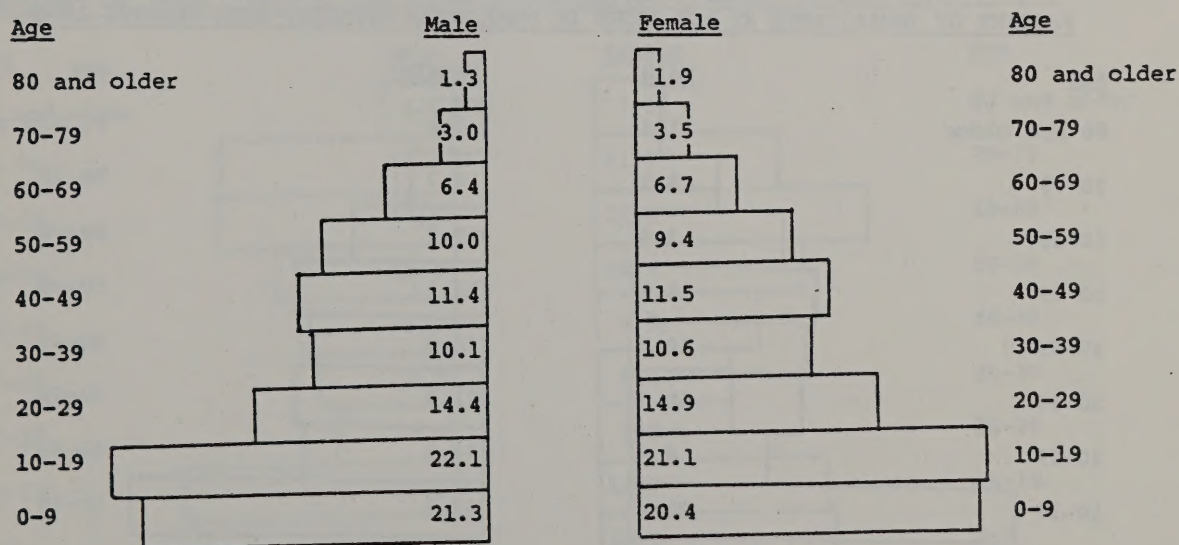


Note: For scale, one inch equals ten percent of male or female population.

Source: U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Population Characteristics, 1973.

TABLE 2.9

PERCENT OF INHABITANTS BY AGE SHOWN IN POPULATION PYRAMID, GRANT COUNTY, 1970

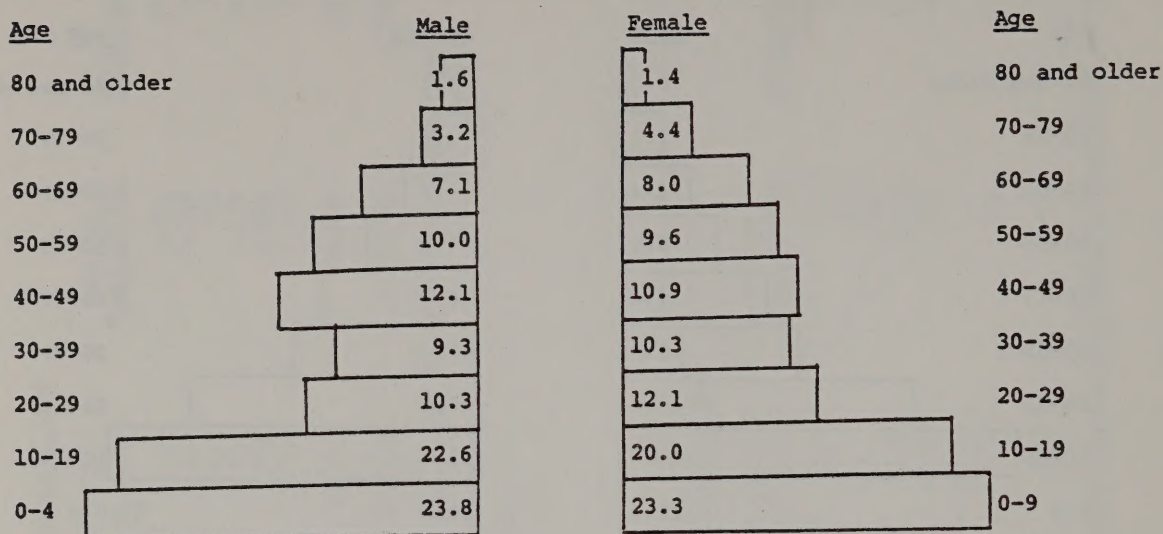


Note: For scale, one inch equals ten percent of male or female population.

Source: U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Population Characteristics, 1973.

TABLE 2.10

PERCENT OF INHABITANTS BY AGE SHOWN IN POPULATION PYRAMID, HIDALGO COUNTY, 1970

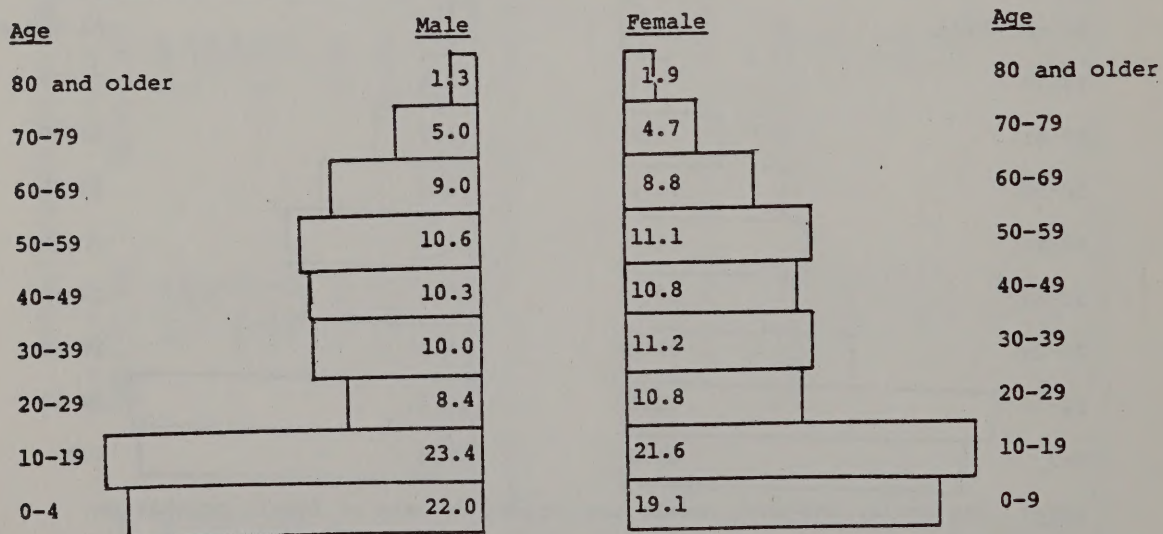


Note: For scale, one inch equals ten percent of male or female population.

Source: U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Population Characteristics, 1973.

TABLE 2.11

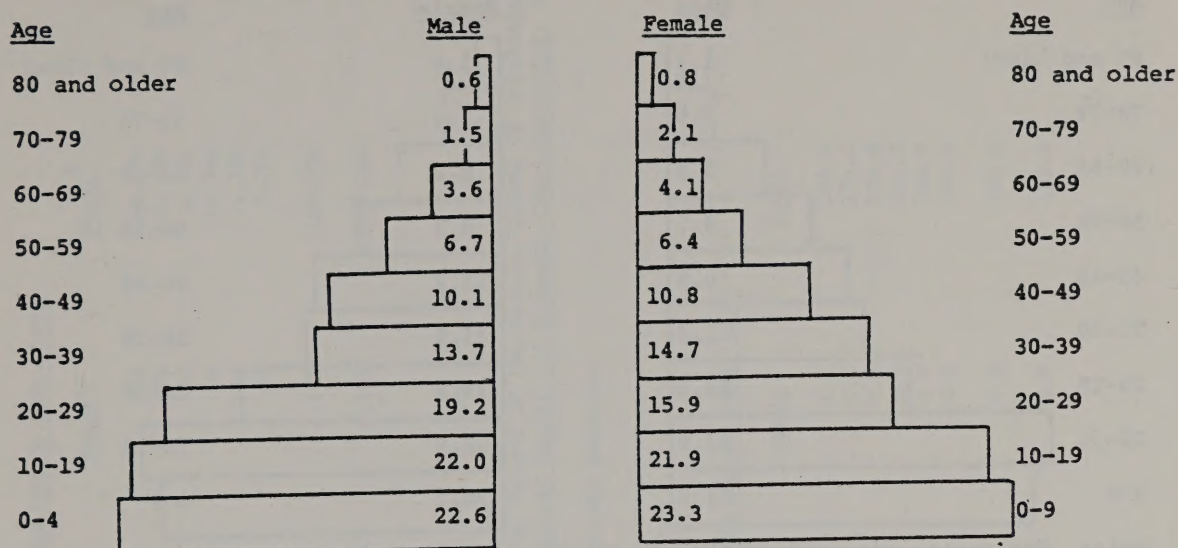
PERCENT OF INHABITANTS BY AGE SHOWN IN POPULATION PYRAMID, LUNA COUNTY, 1970



Note: For scale, one inch equals ten percent of male or female population.

Source: U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Population Characteristics, 1973.

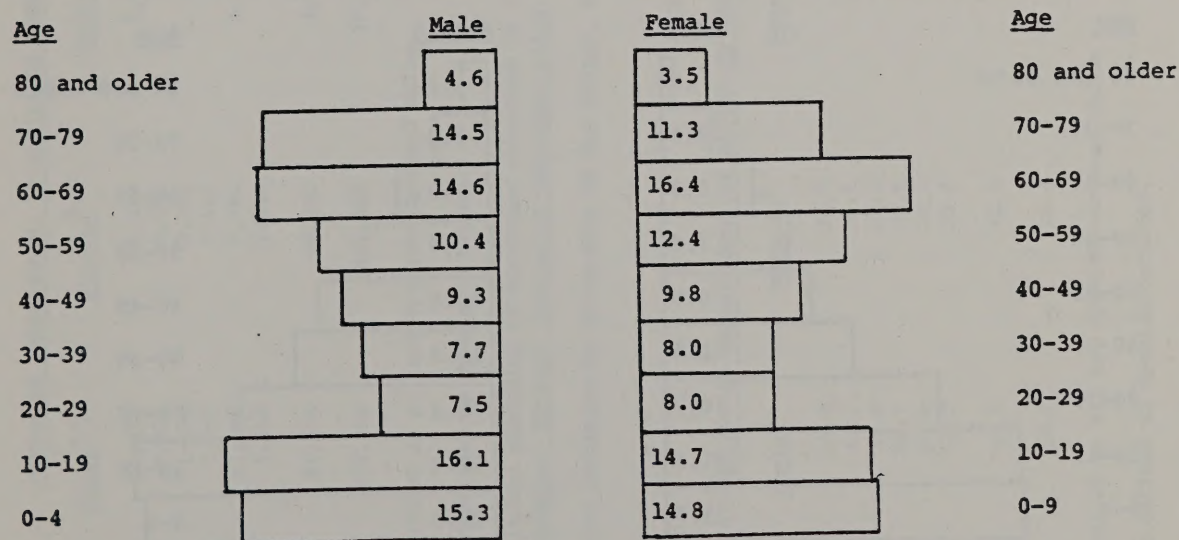
TABLE 2.12

PERCENT OF INHABITANTS BY AGE SHOWN IN POPULATION PYRAMID, OTERO COUNTY, 1970

Note: For scale, one inch equals ten percent of male or female population.

Source: U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Population Characteristics, 1973.

TABLE 2.13

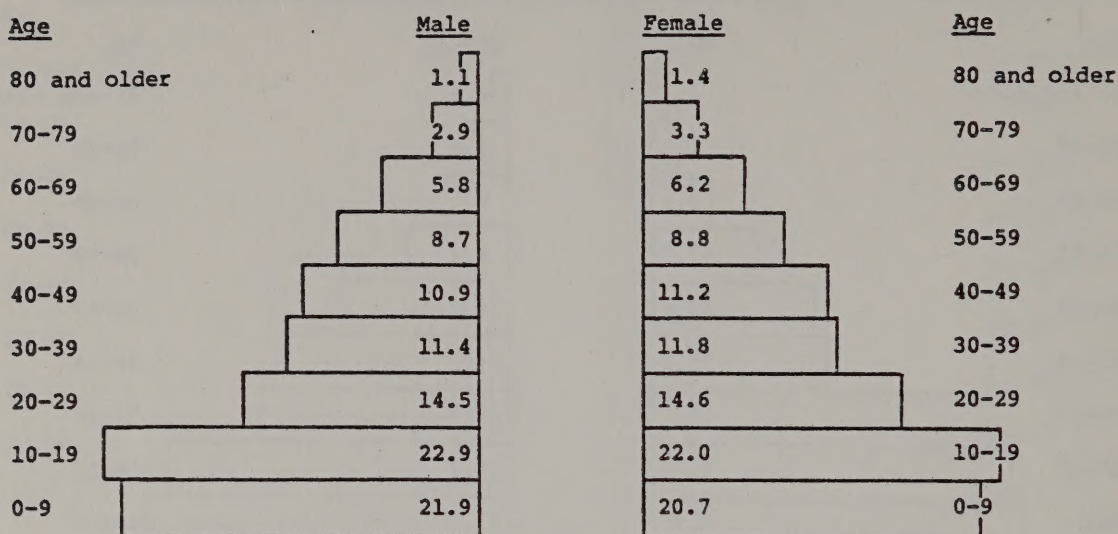
PERCENT OF INHABITANTS BY AGE SHOWN IN POPULATION PYRAMID, SIERRA COUNTY, 1970

Note: For scale, one inch equals ten percent of male or female population.

Source: U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Population Characteristics, 1973.

TABLE 2.14

PERCENT OF INHABITANTS BY AGE SHOWN IN POPULATION PYRAMID, SEPA, 1970

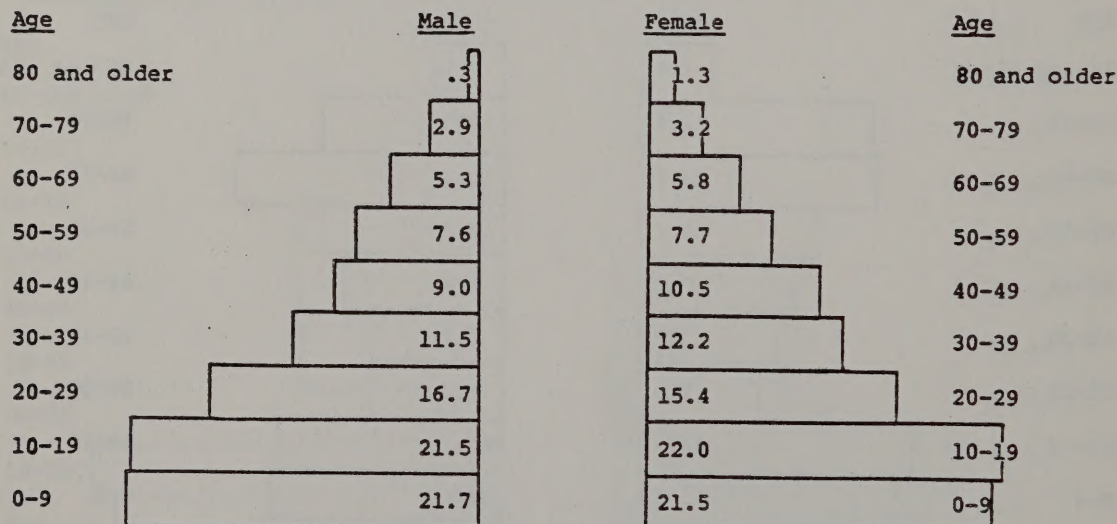


Note: For scale, one inch equals ten percent of male or female population.

Source: U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Population Characteristics, 1973.

TABLE 2.15

PERCENT OF INHABITANTS BY AGE SHOWN IN POPULATION PYRAMID, NEW MEXICO, 1970



Note: For scale, one inch equals ten percent of male or female population.

Source: U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Population Characteristics, 1973.

TABLE 2.16

NUMBER OF INHABITANTS, BY RACIAL OR ETHNIC GROUP, SOUTHWESTERN NEW MEXICO SEPA, 1970

County	Anglo ^{a,c}	Hispano ^{b,c}	Negro ^c	Indian ^c	Other ^c	Total ^d
Dona Ana	32,085	35,510	1,330	210	765	69,900
Grant	9,325	12,400	110	90	175	22,100
Hidalgo	1,870	2,765	20	15	30	4,700
Luna	5,955	5,440	235	10	60	11,700
Otero	27,680	9,790	1,850	1,610	370	41,300
Sierra	4,560	2,575	5	15	45	7,200
SEPA	81,475	68,480	3,550	1,950	1,445	156,900
New Mexico	509,050	408,260	19,345	73,305	8,140	1,018,100

Notes: ^aAnglo defined as all not Spanish-surnamed White.

^bHispanic defined as Spanish-surnamed.

Sources: ^cDistributed according to breakdown contained in U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Population Characteristics, 1973 and New Mexico: General Social and Economic Characteristics, 1973.

^dMid-year estimates by University of New Mexico, Bureau of Business and Economic Research.

TABLE 2.17

PERCENT OF INHABITANTS, BY RACIAL OR ETHNIC GROUP, SOUTHWESTERN NEW MEXICO SEPA, 1970

County	Anglo ^a	Hispano ^b	Negro	Indian	Other	Total
Dona Ana	45.9	50.8	1.9	0.3	1.1	100.0
Grant	42.2	56.1	0.5	0.4	0.8	100.0
Hidalgo	39.8	58.8	0.4	0.4	0.6	100.0
Luna	50.9	46.5	2.0	0.1	0.5	100.0
Otero	67.0	23.7	4.5	3.9	0.9	100.0
Sierra	63.3	35.8	0.1	0.2	0.6	100.0
SEPA	52.0	43.6	2.3	1.2	0.9	100.0
New Mexico	50.0	40.1	1.9	7.2	0.8	100.0

Notes ^aAnglo defined as all not Spanish-surnamed White.

^bHispanic defined as Spanish-surnamed.

Source: U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Population Characteristics, 1973 and New Mexico: General Social and Economic Characteristics, 1973.

TABLE 2.18

NUMBER OF INHABITANTS, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1976-2000

<u>County</u>	<u>1976^a Population</u>	<u>Percent of SEPA Population</u>	<u>1980^b Population</u>	<u>Percent of SEPA Population</u>	<u>1990^b Population</u>	<u>Percent of SEPA Population</u>	<u>2000^b Population</u>	<u>Percent of SEPA Population</u>
Dona Ana	81,900	46.3	88,500	46.7	108,100	48.2	131,700	49.8
Grant	24,000	13.6	25,500	13.4	30,000	13.4	35,100	13.3
Hidalgo	6,000	3.4	7,900	4.2	8,900	4.0	10,000	3.8
Luna	14,600	8.2	15,500	8.2	18,000	8.0	20,900	7.9
Otero	41,600	23.5	42,800	22.6	47,800	21.3	52,800	19.9
Sierra	8,800	5.0	9,500	5.0	11,600	5.1	14,200	5.3
SEPA	176,900	100.0	189,700	100.0	224,400	100.0	264,700	100.0
New Mexico	954,700	696.9	1,304,800	687.8	1,561,900	696.0	1,854,400	700.6

Sources: ^aUniversity of New Mexico, Bureau of Business and Economic Research, New Mexico Statistical Abstract, 1977.

^bHarbridge House, Inc. projections revised from 1976 figures of University of New Mexico, Bureau of Business and Economic Research.

presented for the six counties and southwestern New Mexico generally on the basis of the rates of growth recorded between 1960 and 1976. While these projections are significantly lower than those generally utilized by the University of New Mexico, Bureau of Business and Economic Research (BBER), they correspond to the low range of BBER figures and resemble the recent data contained in the OBERS printouts of the U.S. Department of Commerce, Bureau of Economic Analysis. In general, these county projections were made utilizing rates of growth consistent with recent experience, and no assumptions of future accelerations in economic or demographic development were made, with one exception in Hidalgo County, where a new smelter at Playas is expected to have significant population impacts.

As shown in Table 2.18, the population of the SEPA is expected to grow by 899,700 persons, or 94.2 percent, between 1976 and 2000. The greatest actual gains will be registered in Dona Ana County, whose population in the year 2000 will be 131,700 persons, or 49.8 percent of the total for the SEPA. The greatest relative increases will be experienced in Hidalgo County, where the number of the county's residents will be increased by 66 percent in the 24 years after 1976. These projections for Dona Ana and Grant counties correspond closely with recent 1980 "median" population projections by the University of New Mexico (Temple, 1977). "High" estimates of population in 1980, however, fall short of respective projections for Hidalgo and Sierra Counties in Table 2.18 by 1,900 and 1,200. Conversely, estimates for Luna and Otero counties indicate a faster growth rate than predicted herein; "low" population projections for these two areas average 10 percent more than 1980 figures in Table 2.18, and 13 percent more in the case of "high" projections. Differences occur because the projections contained in Table 2.18 are extrapolations from present trends, while other projections assume patterns of development not yet apparent. For comparative purposes, "low," "median," and "high" population projections are given in Appendix A.

The populations of incorporated communities in the SEPA are also expected to grow significantly. The city of Las Cruces will have 60,075 inhabitants by the end of the century, compared to 40,797 in 1976. Some local planners suggest that the growth of presently unincorporated areas near Las Cruces will be more rapid, resulting in a metropolitan area of as many as 100,000 persons by the year 2000. Table 2.19 details population projections for cities, towns and villages in the SEPA. The only exception to the pattern of projected growth would be Hurley, in Grant County, whose population has been declining in recent years. As Table 2.19 shows, population densities in all parts of the SEPA will rise significantly in the 24 years between 1976 and 2000.

TABLE 2.19

NUMBER OF INHABITANTS, INCORPORATED COMMUNITIES, SOUTHWESTERN NEW MEXICO SEPA, 1976-2000

<u>Community</u>	<u>Location by County</u>	<u>Type of Incorporation</u>	<u>1976 Population</u>	<u>1980 Population</u>	<u>1990 Population</u>	<u>2000 Population</u>	<u>1976-2000 Average Annual Growth Rate</u>
Alamogordo	Otero	City	23,575	24,155	25,410	26,660	0.5
Bayard	Grant	Village	2,907	3,160	3,570	3,975	1.3
Central	Grant	Village	1,883	1,975	2,195	2,510	1.2
Cloudcroft	Otero	Village	594	645	800	950	2.0
Columbus	Luna	Village	259	270	310	345	1.2
Deming	Luna	City	10,640	11,355	13,870	16,400	1.8
Hatch	Dona Ana	Village	898	925	985	1,045	0.6
Hurley	Grant	Town	1,626	1,630	1,640	1,650	0.1
La Mesilla	Dona Ana	Town	1,911	2,070	2,465	2,870	1.7
Las Cruces	Dona Ana	City	40,797	44,545	52,310	60,075	1.6
Lordsburg	Hidalgo	City	3,948	3,950	4,265	4,575	0.6
Silver City	Grant	Town	9,319	9,675	11,185	12,695	1.3
Truth or Consequences	Sierra	City	5,458	5,635	6,400	7,165	1.1
Tularosa	Otero	Village	3,018	3,150	3,485	3,820	1.0
Virden	Hidalgo	Village	190	200	235	270	1.5
Williamsburg	Sierra	Village	632	845	1,375	1,905	4.7

Source: Harbridge House, Inc., linear projections on the basis of data contained in Table 2.5.

2.2 Public Attitudes

Because land is perceived to be a resource which can support particular economic activities, recreational uses, and concomitant lifestyles, residents of the SEPA often evidence strong interest in land use and public lands. The attitudes which they express vary in intensity of feeling with the perceived importance of public lands to individual well-being. Inevitably, communities are characterized by a number of interest groups with varying attitudes toward land use, depending on the ways in which residents view public lands. The larger and more diverse the population of an area is, the greater the number of these interest groups. The SEPA contains a diversity of opinion corresponding to its relatively large size.

Ultimately, attitudes expressed by residents of the SEPA derive from values held locally, or at least by one of the sociocultural groups living in the region. For example, one value commonly held by ranchers is that agriculture, in general, and ranching, in specific, represent the basis of the human economy, providing for the essential need of all men for food. Therefore, ranchers feel that farming and ranching are fundamentally good and ought to be encouraged. This feeling often translates into the attitude that ranching ought to have priority in making use of public lands, and that government policy ought to seek to reduce ranch costs, including grazing fees. This attitude is strengthened by a history of public lands management, in which ranchers were left in effective possession of permitted allotments for many years. Recent administrations have emphasized multiple use and have angered many permittees. The change is suggested by one rancher's remark, "there's nothing wrong with things now, you've just got to cooperate with people. When I was a boy, you didn't have to cooperate with nobody" (Parsons and Earney, 1978).

Ranchers are not the only group whose attitudes bear directly on the disposition of public lands. Mining interests are intensely concerned about planning decisions affecting permitted land uses--in particular, companies and individual prospectors, and engineers seek to keep open access to public lands. They oppose expansion of wilderness and roadless areas insofar as these designations might obstruct resource development. This opposition stems from the value which mining interests place on development of resources. From this one perspective, mineral production is associated with economic progress and improvement in living standards, quality of life, and human technology. Hence, mining represents a good, and its obstruction an evil. These beliefs underlie opinions expressed in regard to specific proposals.

Similarly, recreational users of all types place great value on their ability to pursue leisure time activities, especially those in which individual users are most interested. Two examples suggest attitudes among users. Hunters form a distinct group, believing in wildlife conservation on public lands and improved access to game areas. Hunting represents for many users a necessary recreational release from workday pressures and their opinions take on a corresponding

intensity. Drivers of off-road vehicles (ORV's) form a second group of recreational users. Representatives of ORV associations and clubs suggest that so-called "free-wheeling" is a vital expression of the individuality of their members, and many drivers plan their week around leisure-time ORV activities. From the perspective of ORV enthusiasts, public lands should be managed to insure access to four-wheelers and freedom for their driving, just as hunters believe public lands management should incorporate their priorities. These feelings motivate the numerous letters and statements included in planning unit public participation plans.

Indeed, conflicts in land use continually occur between provision of wildlife habitat and supply of developed recreational sites, between timber harvest and preservation of wilderness, between urban development and regional planning, between proponents of resource development and no-growth advocates, between believers in government multiple-use management of public lands and private businessmen and ranchers seeking to obtain land for their activities. Often individual attitudes can be identified with several of these opposing interests. Ranchers often argue for a public commitment to and investment in range conservation, but oppose expansion of federal and state land ownership, as in defense installations, wildlife refuges and wilderness areas. These livestock operators dislike urbanization of agricultural lands, but favor sale of public lands to private purchasers.

Perhaps the strongest feelings in the SEPA are expressed with regard to water supply and use. The intensity with which residents outline their opinions on water problems reflects the real pressures existing in an arid environment. Water is in short supply throughout the SEPA, as discussed in Section 5.0. Development of new sources of supply is often dependent on large-scale capital improvements. Recent studies in the SEPA suggest that most residents are aware generally of water problems. Despite what one survey revealed to be the sizable and widespread political-economic conservatism of the respondents, most inhabitants of southwestern New Mexico appeared to support federal government planning and spending to increase water supplies (New Mexico State University, 1976).

Although support of concerted planning and spending on water projects is general, support of concerted planning and zoning for land uses is not. While there is concern over the loss of agricultural land to urban development, especially in the vicinity of Las Cruces and in the lower Rio Grande Valley, conflicting attitudes exist over how to deal with the phenomenon. Urbanization, as noted in the review of survey responses below, is generally acknowledged to pose problems which localities in the area are not accustomed to handling. There is also widespread agreement that agricultural uses of land ought to be encouraged, or at least protected against urban encroachment. However, stringent measures which would limit the ability of property owners to sell or subdivide land are hotly opposed by residents, and support for federal land use planning is less extensive than for planning at local, regional and state levels.

Specific areas, objects or resources often arouse the most intense expressions of feeling from residents of the SEPA. There are certain places or things which are valued by almost all inhabitants of southwestern New Mexico, such as desert and mountain areas. Residents of Alamogordo, Las Cruces, and Silver City share the attitude that nearby physical features--the Sacramento, the Organ, and the Mogollon Mountains respectively ought to be preserved and protected. These areas are centers of recreational activity by local citizens and are the source of much civic pride. The Rio Grande is also viewed proudly by inhabitants of Dona Ana and Sierra Counties due to uses of its water for agriculture, industry, residences, and recreation.

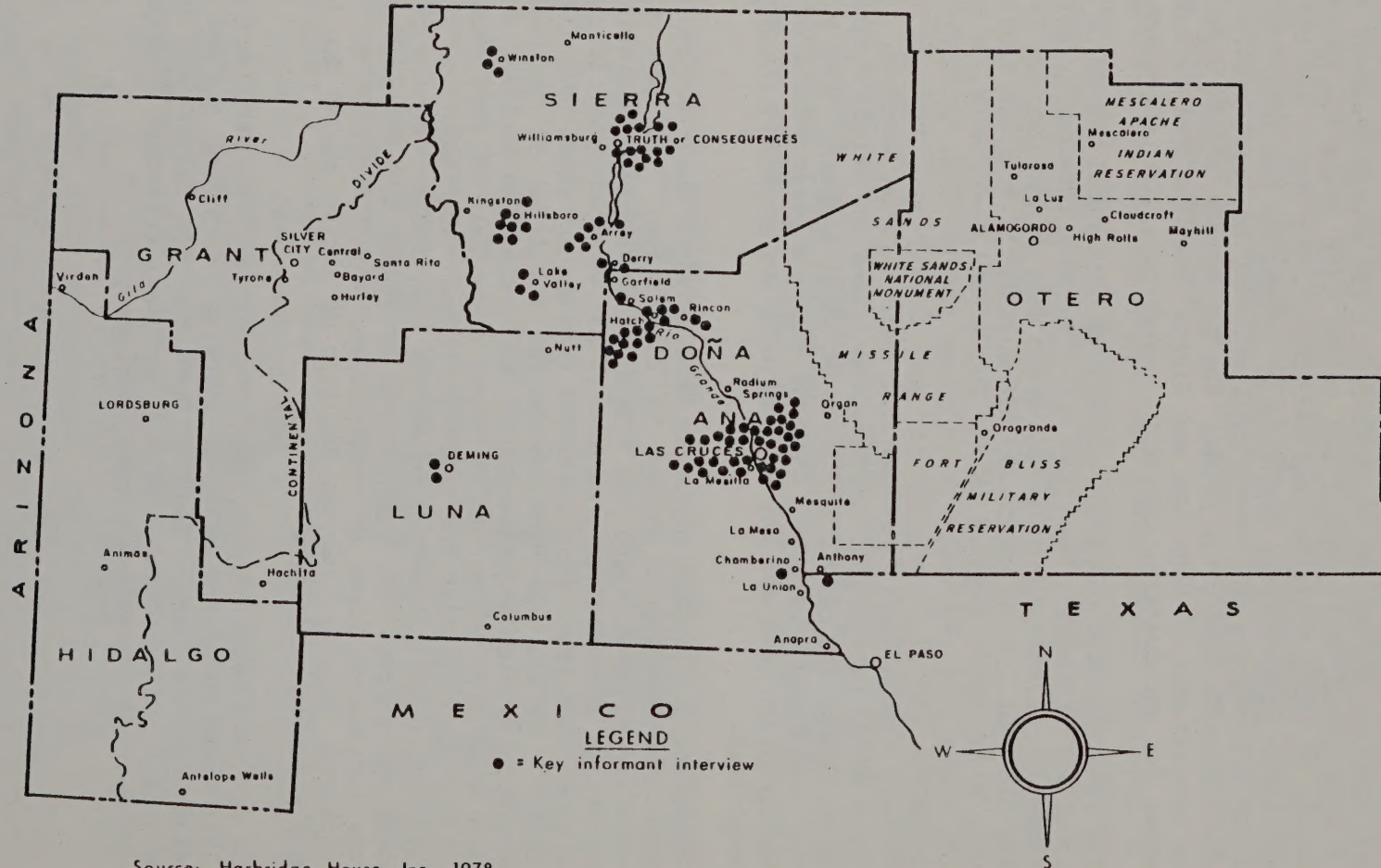
The SEPA contains the sites of several historical events of state and local significance. The sites are of broader interest insofar as they exemplify persons and occasions which have passed into the folklore of the old West. Fort Selden and Old Mesilla in Dona Ana County are two such sites which figured in the Indian and Civil Wars, as well as in the history of the Butterfield Stage and the life of Billy the Kid. Columbus and its environs in Luna County are the site of Pancho Villa's famous raid into American territory on March 9, 1916. The Three River Petroglyphs in Otero County and the Salado Indian Ruins in Grant County are also the objects of local concern. Less widespread, but nonetheless intense, feelings for the preservation of the Lake Valley ghost town and the malpais lavaflow in Sierra County are also expressed.

Residents of the SEPA appear to be ambivalent about economic development and demographic change in the region. In past surveys, a majority of both Anglo and Hispanic respondents consistently chose no-change alternatives in general, but favored specific development options when these were discussed (New Mexico State University, 1964, 1976). On the one hand, long-term residents of southwestern New Mexico have been acquainted with depression and decline, and want to have expansion and growth in order to be able to hold good jobs and create opportunities for their children. Many also feel that, their opinions notwithstanding, growth is inevitable. On the other hand, they worry about the implications of growth and are concerned about the increasing sizes of communities, the diminution of individual influence locally, and the dilution of native values due to the immigration of outsiders.

As outlined below for the ESA, inhabitants of southwestern New Mexico like their towns and counties the size which they are now or traditionally have been. They believe that the future will bring more migrants and destruction of the trusting, friendly, easy-going atmosphere. As a previous survey concluded:

FIGURE 2.3

LOCATION OF KEY INFORMANT INTERVIEWS
SOUTHWESTERN NEW MEXICO SEPA, 1978



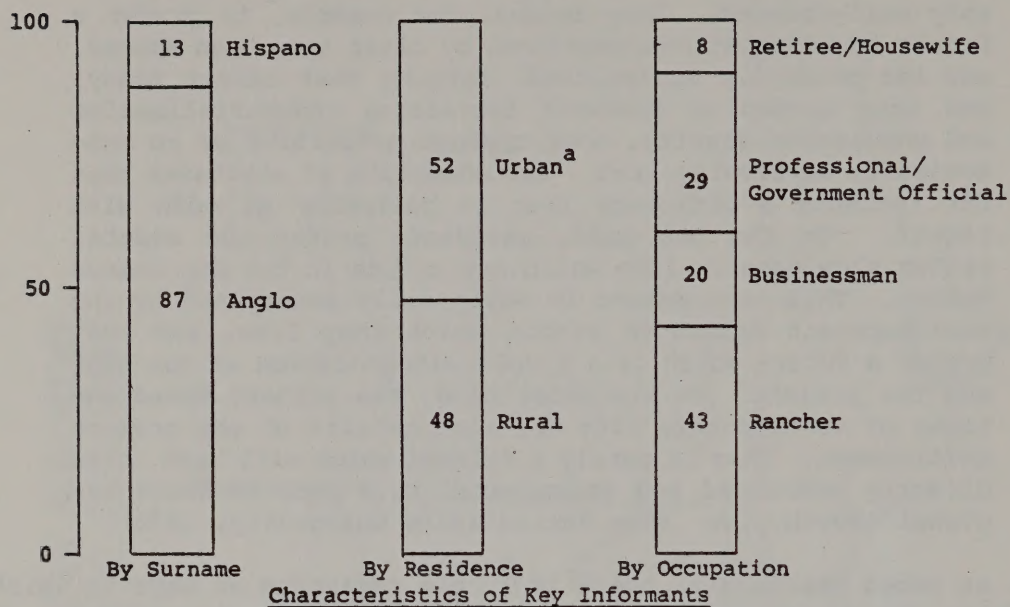
Source: Harbridge House, Inc., 1978

In selecting from a number of alternative regional growth scenarios, respondents' choices of desirable growth prospects for themselves and for their communities were remarkably well-ordered. They tended, for example, to prefer a future environment characterized by clean air, open spaces, and the primarily agricultural setting that exists today; and they tended to disfavor increasing industrialization and population density, some typical properties of an economically developing area. The composite of attitudes thus far reflects a citizenry that is basically at odds with itself. On the one hand, residents prefer the sedate, rather slow pace of life which now exists in the Rio Grande Valley. This environment is essentially determined by the socioeconomic framework within which they live, and they prefer a future which is a simple extrapolation of the past and the present. On the other hand, the primary disadvantages of contemporary life are also results of the present environment. This is purely a dilemma which will have to be directly addressed and encompassed in a comprehensive regional growth plan (New Mexico State University, 1976).

Yet, as noted previously, there is little consensus on ways in which planning decisions should be enforced and growth controlled. A further conflict exists in the friendliness of residents toward individual migrants and other outsiders (such as winter visitors, or so-called "snowbirds"), especially in resort and retirement areas, and the hostile feelings shown to government. Historically, the inhabitants of the SEPA have treated government, especially the federal government, as a threat to the regional tradition of individualism and self-determination. Local suspicion of government action increases the more distant the location of a particular government agency, with county and municipal administrations engendering the most trust and federal authorities the least. A few groups, especially environmentalists, have taken a different position with respect to preservation of wilderness and wildlife, and have encouraged government action. However, most residents do not share this interventionist attitude, and many associate it with unidentified wealthy outsiders from El Paso and Washington. These attitudes work against effective planning and growth control.

Public lands are a significant resource in southwestern New Mexico, as noted in Section 1.0. Their use dictates to a certain extent the ways in which nearby communities can develop. Ranchers in the SEPA view the future with foreboding because they feel that federal policies and practices are denying them full use of public lands. They perceive trends toward increased competition for range, higher grazing fees and other expenses, growing pressures from urban areas (with consequent vandalism of ranch facilities and deterioration of range-lands), and more federal regulation. Their solution to these problems--the sale of public lands to permittees--is not one ranchers

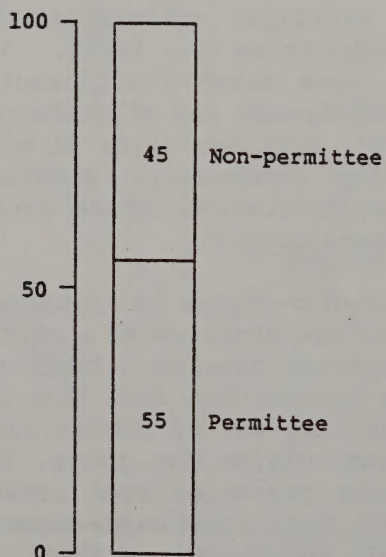
TABLE 2.20

CHARACTERISTICS OF KEY INFORMANTS, ENVIRONMENTAL STATEMENT AREA

Note: ^a An urban area is defined as a community of 3,000 or more persons.

Source: Harbridge House, Inc., interviews with key informants, 1978.

TABLE 2.21

PERMITTEES AMONG KEY INFORMANTS, ENVIRONMENTAL STATEMENT AREA

Source: Harbridge House, Inc., interviews with key informants, 1978.

expect to be adopted. Consequently, they are pessimistic about the survival of ranching life-styles. Their neighbors and friends in rural areas and small towns share many of these attitudes. Persons who chose isolated ranching communities for their retirement homes often express more anger than ranchers at a perceived pattern of malign treatment.

Residents of urban areas are less pessimistic about the future than ranchers and residents of rural areas. There is some uncertainty among local leaders, particularly in the Las Cruces area and in small communities in Grant and Otero Counties, that they can adequately provide local services to swelling populations. Their concerns seem greatest in relation to water, wastewater treatment and natural gas utilities. There is little fear, however, that established life-styles are in jeopardy.

In order to obtain specific information regarding attitudes and values in the SEPA, Harbridge House, Inc., conducted interviews with selected residents of the Southern Rio Grande Planning Area during two weeks in June, 1978. These inhabitants of Dona Ana, Luna, and Sierra Counties live in the three planning units of the Las Cruces District--Caballo, Las Uvas, and Organ--which make up the ESA. Responses are intended to assist in preparation of the grazing environmental statement, but also to be representative of attitudes in the SEPA generally. Residents were interviewed as so-called "key informants," utilizing an informal, unstructured instrument designed to obtain specific sociocultural information. Interviewees afforded an indication of those issues and feelings which are most central to the lives of individuals and groups in the ESA, as well as suggesting how residents perceive themselves as individuals and as members of the community.

The selection of key informants in the ESA centered upon the compilation of a list of potential interviewees from various sources within the community. These sources were contacted by telephone and in person. One initial approach was to ascertain the formal, political, and social organization in the locality and to contact key officials. These persons then suggested other potential key informants, as well as outlined the informal organization and interest groups within the community in which some of these newly named individuals were prominent. Representatives of such informal leaders and decision-makers in the area included prominent landholders, businessmen, university staff, and civic leaders. Such persons are tied into the patterns of information flow in the community and are articulate spokespeople of local values and concerns. A second approach in contacting key informants was to obtain a list of permittees and other interested persons from the Las Cruces District Office. More than 80 individuals on these lists were then contacted. Every effort was made to insure that the groups most involved with public lands in the ESA were represented.

TABLE 2.22

ATTITUDES OF KEY INFORMANTS TOWARD THEIR COMMUNITIES, ENVIRONMENTAL STATEMENT AREAHow well do you like living in this area?

<u>Characteristics of Informants</u>	<u>Not Very Much</u>	<u>Somewhat</u>	<u>Very Much</u>	<u>Completely Love It</u>	<u>No Response</u>	<u>Total</u>
Total	0	7	53	39	1	100
By ethnic group:						
Anglo	0	6	43	37	1	86
Hispano	0	1	10	2	0	14
By residence:						
Resident of rural area	0	3	18	27	0	48
Resident of urban area	0	4	35	12	1	52
By occupation:						
Farmer or rancher	0	2	18	23	0	43
Businessman	0	1	12	7	0	20
Professional/Government official	0	3	21	5	0	29
Retiree/Housewife	0	1	2	4	1	8

Source: Harbridge House, Inc., interviews with key informants, 1978.

TABLE 2.23

POSITIVE PERCEPTIONS OF THEIR COMMUNITIES AMONG KEY INFORMANTS, ENVIRONMENTAL STATEMENT AREAWhat aspects of living in the area do you especially like?

<u>Characteristics of Informants</u>	<u>Ranching/Rural Life-Style</u>	<u>Climate</u>	<u>Small Size/Neighborhoodness of Community</u>	<u>Friendly People</u>	<u>Beauty of Area</u>	<u>Recreational Opportunities</u>
Total	44	32	30	29	23	20
By ethnic group:						
Anglo	38	28	25	21	23	19
Hispano	6	4	5	8	0	1
By residence:						
Resident of rural area	34	13	8	15	15	7
Resident of urban area	10	19	22	14	8	13
By occupation:						
Farmer or rancher	27	12	2	14	14	6
Businessman	5	7	10	4	3	6
Professional/Government official	10	9	15	9	3	4
Retiree/Housewife	2	4	3	2	3	4

Note: Informants provided multiple responses to question, so figures total to more than 100.

Source: Harbridge House, Inc., interviews with key informants, 1978.

When each individual was contacted, he or she was asked to suggest additional names of likely key informants. As the process of contacting community leaders continued, a "snowballing" effect occurred and an extensive list of prospective interviewees was developed. This procedure of contacting community leaders and asking for the names of credible and respected group leaders and members, and for a listing of significant social issues, is called "judgmental sampling." This process continued until no new names or issues were suggested. (An authority on the subject of judgmental sampling and its external validity on both professional and academic levels is Denzin, 1970.) From the list of potential key informants thus obtained, a cross section was then taken of those contacts who were representative of the diverse groups and interests within the community, and who were expected to yield the most valid and detailed responses. These individuals were then interviewed as key informants in the ultimate Harbridge House survey.

Harbridge House implemented, orally, a memorized instrument. There were no written questionnaires and no note-taking during interviews. Additionally, questions were open-ended and encouraged personal monologues about communities and developments in the region. However, interviews also included more limited kinds of questioning that focused upon selection of responses from a range (e.g., negative, neutral, positive). Following the interviews and in private, researchers recorded the types of responses received. Some questions used semantic differential design, a technique which is also called complementary opposition of adjective pairs, including asking the subject to rate a given concept on a series of 7-point, bipolar rating scales. This particular technique has certain advantages. First, it deals primarily with individual attitudes, particularly if administered in a closed situation (no other informants present). Second, the interviewer is quite able to code the informant's words (the interviewer can memorize a numerical rating and later record a number which has all the obvious advantages that are inherent with such symbols). Next, this design acts as an appropriate supplement to other possible designs and it permits great flexibility in programming material. Finally, a critical advantage is the ease of response by informants.

Upon completion of interviewing, interviewer notes were examined. These notes were judged to be accurate and complete records of 97 interviews; results of other conversations were disallowed. Characteristics of key informants contacted in these interviews are given in Tables 2.20 and 2.21. The distribution of interviewees by ethnic identification, character of residence and occupation appear consistent with previous surveys in the SEPA, in particular with an effort undertaken in Dona Ana and Sierra Counties during 1975 and 1976 by New Mexico State University (NMSU) for the Bureau of Reclamation. The two

TABLE 2.24

ATTITUDES OF KEY INFORMANTS TOWARD COMPONENTS OF COMMUNITY INFRASTRUCTURE, ENVIRONMENTAL STATEMENT AREA

<u>Characteristics of Informants</u>	<u>Effectiveness of Government</u>	<u>Law Enforcement</u>	<u>Average Ratings^a</u> <u>Public Education</u>	<u>Health Care</u>	<u>Recreational Facilities</u>
Average	40	50	50	35	65
By ethnic group:					
Anglo	45	55	50	25	70
Hispano	50	60	65	45	45
By residence:					
Resident of rural area	55	55	40	35	65
Resident of urban area	30	50	55	40	60
By occupation:					
Farmer or rancher	45	60	45	25	70
Businessman	35	45	50	45	60
Professional/Government official	50	50	55	50	60
Retiree/Housewife	35	50	50	45	80

Note: ^a Ratings averaged on a scale 1 - poor, 2 - fair, 3 - good, 4 - excellent, and shown comparatively with lowest rating being set equal to 0 and highest rating being set equal to 100.

Source: Harbridge House, Inc., interviews with key informants, 1978.

TABLE 2.25

ATTITUDES OF KEY INFORMANTS TOWARD ASPECTS OF QUALITY OF LIFE LOCALLY, ENVIRONMENTAL STATEMENT AREA

<u>Characteristics of Informants</u>	<u>Sufficiency of Housing</u>	<u>Adequacy of Shopping</u>	<u>Average Ratings^a</u> <u>Number of Jobs</u>	<u>Level of Incomes</u>	<u>Quality of Community as a</u> <u>Place to Raise Family</u>
Average	15	25	5	15	80
By ethnic group:					
Anglo	15	25	0	15	80
Hispano	10	30	30	15	85
By residence:					
Resident of rural area	5	10	5	20	80
Resident of urban area	20	35	0	15	80
By occupation:					
Farmer or rancher	15	20	5	20	85
Businessman	20	35	0	10	60
Professional/Government official	0	30	0	20	80
Retiree/Housewife	10	25	5	10	90

Note: ^a Ratings averaged on a scale 1 - poor, 2 - fair, 3 - good, 4 - excellent, and shown comparatively with lowest rating being set equal to 0 and highest rating being set equal to 100.

Source: Harbridge House, Inc., interviews with key informants, 1978.

studies share an apparent problem. In the NMSU survey, only 16.9 percent of all respondents identified themselves as Hispanic. In the Harbridge House interviews, only 13.4 percent of key informants were Spanish-surnamed. However, as previously noted, Hispanics represent 43.6 percent of the population of the SEPA, and 50.8 percent of the population of Dona Ana County. In both efforts, survey contacts were made with persons who were believed to be formal or informal leaders of their communities. The two studies taken together suggest that Hispanics are relatively underrepresented in positions of leadership in the ESA.

The large number of ranchers included as key informants reflects the relative significance of public lands to ranch operators.

Information provided by key informants suggests that the Southern Rio Grande Planning Area is similar to other parts of the American Southwest, at least in how it is perceived by residents. Table 2.22 shows that most key informants are very satisfied with the quality of life in the ESA. When asked for positive aspects of living in the area, respondents mentioned a large number of attributes, but emphasized the ranching or rural life-style which they could follow, the climate which they could enjoy, and the small size, slow pace, neighborliness and friendly feelings of their communities. All these responses are shown in Table 2.23. Key informants could not agree so easily on what the negative aspects of living in the area are. In fact, 27 persons denied that there were any negative characteristics of local quality of life. Only two specific items were mentioned by more than 10 interviewees. Population growth and urbanization were mentioned by 20 respondents, who cited problems with conflicting land uses and deteriorating public services as one consequence of this growth. Lack of water was suggested by 12 informants. There was no differentiating pattern discernible in responses from different groups.

When key informants were asked to rate components of community infrastructure, they indicated that local governments, law enforcement, public education, and health care were all better than average. Recreational facilities were considered good to excellent. Ratings are shown in Table 2.24. However, other aspects of quality of life in their communities were viewed less positively, most of which related to the regional economy: ability to find employment, ability to earn a good income, adequacy of shopping and sufficiency of housing. These ratings are detailed in Table 2.25. Despite these attitudes, key informants indicated that overall the ESA was good to excellent as a place in which to raise a family. Such results are consistent with previous surveys in southwestern New Mexico, which also revealed widespread discontent with a perceived lack of job opportunities and apparent inadequacy of suitable incomes. However, as the other studies have concluded, the unanimity of the sample in identifying favorable aspects of life in the area outweighed all local shortcomings.

TABLE 2.26

PERCEPTIONS OF COMMUNITY FEELINGS AMONG KEY INFORMANTS,
ENVIRONMENTAL STATEMENT AREA

<u>Characteristics of Informants</u>	<u>Do most residents feel part of one community?</u>	
	<u>Yes</u>	<u>No</u>
Total	90	10
By ethnic group:		
Anglo	77	10
Hispano	13	0
By residence:		
Resident of rural area	46	3
Resident of urban area	44	7
By occupation:		
Farmer or rancher	39	4
Businessman	19	1
Professional/Government official	26	3
Retiree/Housewife	6	2

Source: Harbridge House, Inc., interviews with key informants, 1978.

TABLE 2.27

ATTITUDES OF KEY INFORMANTS TOWARD LOCAL, STATE AND FEDERAL
GOVERNMENTS, ENVIRONMENTAL STATEMENT AREA

<u>Characteristics of Informants</u>	<u>Ability to Influence Governments^a</u>		
	<u>Local</u>	<u>State</u>	<u>Federal</u>
Average	75	60	35
By ethnic group:			
Anglo	80	65	35
Hispano	50	45	45
By residence:			
Resident of rural area	75	55	30
Resident of urban area	75	65	40
By occupation:			
Farmer or rancher	65	50	20
Businessman	75	60	45
Professional/Government official	85	75	30
Retiree/Housewife ^b	85	85	85

Note: ^a Ability to influence government rated on scale 100 - strongly, 50 - somewhat, 0 - not at all.

^b No retiree or housewife distinguished between levels of government in discussing ability to influence governments.

Source: Harbridge House, Inc., interviews with key informants, 1978.

Relatively few social or political divisions were perceived by interviewees in their communities, as detailed in Table 2.26. The consensus which is apparent in the responses described in Tables 2.23 through 2.25 appears to support this perception. Less than one in ten respondents reported that a large number of their neighbors stood outside the mainstream of local events. Divisions which were mentioned by key informants were few, namely retired vs. nonretired persons, Anglos vs. Hispanos, newcomers vs. long-time residents, and low income persons vs. upper income persons. However, at other times during interviews, conflicting groups within the community were identified, especially in relation to public lands. Respondents often distinguished between ranchers and nonranchers, environmentalists and nonenvironmentalists, as well as ORV enthusiasts, rockhounds and other recreational users. Apparently, differences between these groups are generally perceived to be limited. Likewise, the perceived ability of residents to influence local, state and federal governments--shown in Table 2.27--was not to differ between any particular groups, except the Anglos and Hispanos. However, in answering other questions, respondents (especially ranchers) appeared to ascribe more influence to others in the community (principally environmentalists and recreational users).

In general, attitudes toward land use and public lands in the ESA were a simple function of occupation and interest. Conflicts over management of public lands are as numerous as interested parties. Suburban developers and land use planners, city officials and suburban landowners, advocates of growth and their opponents, ranchers and conservationists, are among those who possess differing attitudes toward land use.

Significant differences exist in the ways in which conflicting groups viewed lands. Ranchers and farmers, while perceiving land as a resource from which they obtain an income, expressed an emotional attachment to their ranch or farm. Grazing permittees interviewed by Harbridge House as key informants included a large number who had inherited their operations and identified their ranching activities with their family history. Three interviewees had moved away from ranches in the vicinity, but had returned to the ESA after unsuccessful attempts to live elsewhere. Their own identities were, as they said, bound up in the physical characteristics of southwestern New Mexico, and the life-style of being a rancher in the region. The strength of this emotional tie to the land is indicated by the fact that most of the ranchers interviewed in this and previous surveys maintained that their ranches were uneconomic and that, given inflation, their real incomes were declining. Ranches were believed to be either too small in size or too dependent on ephemeral desert range to provide a sufficient return on capital investment.

Ranchers in the communities where interviewing was conducted, in the ESA and SEPA generally, and indeed in much of the American Southwest, appear to be motivated by a personal commitment to a ranching life-

TABLE 2.28

ATTITUDES TOWARD CHANGE AMONG KEY INFORMANTS, ENVIRONMENTAL STATEMENT AREA

Characteristics of Informants	What changes in the community have occurred recently?					
	Population Growth	Influx of Retirees	New Home Construction	Deterioration of Services	None	Other
Total	44	25	17	9	13	57
By ethnic group:						
Anglo	37	23	14	7	12	50
Hispano	7	2	3	2	1	7
By residence:						
Resident of rural area	21	11	5	3	10	28
Resident of urban area	23	14	12	6	3	29
By occupation:						
Farmer or rancher	18	7	2	1	8	29
Businessman	12	6	7	0	1	9
Professional/Government official	12	6	6	6	3	18
Retiree/Housewife	2	6	2	2	1	1

Note: Informants provided multiple responses to the question, so figures total more than 97.

Source: Harbridge House, Inc., interviews with key informants, 1978.

TABLE 2.29

RATINGS OF RECENT CHANGE BY KEY INFORMANTS, ENVIRONMENTAL STATEMENT AREA

Characteristics of Informants	In general, how would you rate recent changes in the area?				
	Very Negative	Negative	Neutral	Positive	Very Positive
Total	2	18	34	41	2
By ethnic group:					
Anglo	2	15	31	34	2
Hispano	0	3	3	7	0
By residence:					
Resident of rural area	2	14	18	15	0
Resident of urban area	0	4	16	26	2
By occupation:					
Farmer or rancher	2	13	15	11	0
Businessman	0	1	4	14	1
Professional/Government official	0	4	9	14	1
Retiree/Housewife	0	0	6	2	0

Source: Harbridge House, Inc., interviews with key informants, 1978.

style, and by a "pioneer ethic" which places love of land above monetary considerations. Ranchers may therefore be said to be selected out of the general population by their willingness to earn less in exchange for the nonmonetary rewards of their chosen way of life. Ranching values are explored further in the following subsection. It may be said, however, that ranchers' attitudes toward lands, including grazing units whose ownership may be public, but whose use has been family property for several generations, differ from those of mining companies and recreational users who do not see lands as the basis of a life-style, but as an economic or leisure-time resource to be exploited for the general good. Consequently, the latter more often support notions of public lands management, while the former prefer that public lands be sold to ranchers, or, at least, that ranchers be left undisturbed in their present land use.

However, population growth and economic development in the SEPA are prompting increasing competition between land uses and diminishing the likelihood that ranch operators with grazing permits could be left alone by the rest of the community. Table 2.28 suggests what recent changes key informants perceived as having occurred in their communities. Nearly half identified increases in population as a recent change, while other responses mentioned by interviewees appear related, such as the perceived influx of retirees and new home construction. When asked to rate the overall ways in which their communities are changing, there was a decided difference in the ratings of recent change made by residents of rural areas, farmers and ranchers, and the ratings made by residents of urban areas and businessmen. These ratings are shown in Table 2.29.

Based on increasing competition for forage, higher labor costs, intensifying population pressures, and added government regulations, rural residents--especially farmers and ranchers--view the recent past with greater distaste and the future with more foreboding than urban residents. By contrast, urban residents, especially businessmen, regard past growth and expected development as beneficial both in personal terms and in terms of the community. Whereas rural residents feel threatened by present processes of change, urban residents do not.

2.3 Community Values

Until recently, the communities of southwestern New Mexico were marked by cultural homogeneity within two groups of nearly equal size, Anglos and Hispanos. (Exceptions included Tortugas in Dona Ana County and the Mescalero Apache Indian Reservation in Otero County where Indian groups survived intact, and Vado in Dona Ana County, a largely black settlement of the descendants of freed slaves.) Although there was considerable apparent diversity between the six counties in the SEPA, their communities shared a . . .

. . . western way of life, which includes among its components, the following: small-town living with its customs of friendliness, neighborliness, and mutual aid; for a love of the great outdoors; and adherence to traditional, conservative values, including close family ties, traditional sex roles, and a strong religious life (Mountain West Research, 1975).

Historically, the homogeneity of communities has been broken by political disputes and economic conflicts. For example, the creation of the Coronado, Gila, and Lincoln National Forests aroused considerable local opposition among long-time loggers and ranchers in those areas. More recently, the urban redevelopment of Las Cruces sparked a bitter controversy over the city's future development and the values which it ought to recognize. This latter debate has been repeated and continued in most parts of the SEPA in the arguments over land use controls and regional planning which characterize the 1970's.

The growth of New Mexico State University at Las Cruces, of federal installations like Holloman Air Force Base, Lyndon Johnson Space Center, and the White Sands Missile Range, as well as of support services in cities like Alamogordo and Las Cruces, have undermined the homogeneity of communities in the SEPA. The major problems accompanying the increased diversity within communities are those of social disintegration. There are few friendships, religious or social bonds being formed between newcomers and long-term residents. In addition, the newcomers are more likely to be dissatisfied with local services and facilities such as the schools and medical care. The long-term residents are often unwilling to support newcomers' efforts to expand local government financing of programs which were judged adequate in previous years. Such disagreements are compounded by basic cultural and background differences resulting from the fact that newcomers tend to be of urban origin, are younger and better educated, have fewer children, and have higher average incomes.

Native Anglo residents of the SEPA have traditionally been occupied in ranching and farming in rural areas, and in retail trade and services in the cities. These inhabitants are characterized by agrarian and small-town outlooks which emphasize independence, self-sufficiency and equality. Agriculture is considered to be the basic industry upon which progress and prosperity are based. Rural life-styles are believed to be natural and moral. Ranchers and rural neighbors emphasize the importance of close ties to the land. A rancher is felt to hold "title more as protector than as exploiter; he is responsible to and for the land" (Haslam, 1978). He resents regulation and intrusion by urban outsiders with no roots in the area. Urban living is felt to result in an emphasis upon leisure and materialism, rather than on hard work and asceticism. This distinctive outlook of rural ranchers has been labeled "ranch fundamentalism," which believes "that being a cattle rancher leads to a higher state of well-being than an alternative mode of making a living and way of life could provide" (Smith and Martin, 1975; see also Rodewald and Bostwick, 1971). However, it is increasingly difficult for rural Anglos to support themselves by ranching alone both because of the low incomes

usually gained from ranching and the high costs and hard work required. The transformation of the beef production industry was summarized in the published remarks of one rancher in Sierra County, "as far as the old cowboy business, I don't know what's going to become of it, nobody wants to work, not our way" (Parsons and Earney, 1978). Many Anglos continue to hold on to their ranches while having jobs elsewhere. Notwithstanding this fact, they still perceive themselves to be quite different from the newcomer government employees and private businessmen who have migrated to the region in the last generation.

Anglo newcomers to the SEPA rarely have any direct ties to the land and to agriculture. These individuals tend to have migrated to the area in response to employment opportunities in the federal government and higher education. They exhibit a variety of skills, both blue- and white-collar. In addition, teachers, doctors, business operators, and others not employed directly by government or university have added to the population influx experienced in southwestern New Mexico. While not always in favor of large-scale government spending, they are accustomed to, and on occasion demand, government support of public services and regulation of private enterprise. These newcomers place a higher value on monetary compensation and employment security than long-term residents, and seek to combine jobs with sufficiently high income and benefits with chosen leisure-time activities. Unlike native Anglos, who emphasize the importance of work on the land, newcomer Anglos emphasize the importance of outdoor recreation. Many have moved to the area because of the attractive climate and the recreational opportunities. Because most newcomers settle in urban areas, differences between native and newcomer residents of the SEPA also tend to be those existing between inhabitants of urban and rural communities.

Hispanos in the SEPA include a large percentage who are not descended from early settlers of the Rio Grande Valley. While some Hispanos live on land settled by their fathers and continue in similar lifestyles, others are twentieth century migrants from Mexico who have settled in the so-called "Border Belt" (Galarza, 1972). In recent years, many Hispanos have been forced from rural areas to cities such as El Paso and Juarez in search of work. In some localities like Mesilla, traditional agrarian communities have urbanized as a result of overflow development from Anglo centers. As a result of this urban growth, "the rural Mexican of 50 years ago is being transcultivated into the urban Mexican of today" (Galarza, 1972). This urbanization of Hispanos has led to a growing awareness of, and participation in, Anglo society. With this increased participation has come a growing sense of discrimination which is often greatest among young adults (Loomis, 1955). However, no political or activist organization in the SEPA was mentioned as representing the interests of Hispanic Americans as a group, and relations between Anglos and Hispanos appear usually good.

Whether Hispanos live a traditional rural life in areas like the Hatch and Mesilla Valleys, or live in growing cities like Alamogordo and Las Cruces, they share certain values and beliefs which serve to separate them from Anglo residents. Hispanos share a common language which tends to maintain their cultural cohesion and which works against

TABLE 2.30

VALUES OF KEY INFORMANTS, ENVIRONMENTAL STATEMENT AREA

<u>Characteristics of Informants</u>	<u>Average Rating^a</u>							
	<u>Family Life</u>	<u>This Land</u>	<u>Religious Faith</u>	<u>Meaningful Work</u>	<u>Community Relationships</u>	<u>Personal Development</u>	<u>Academic Achievement</u>	<u>Economic Development</u>
Total	90	60	50	50	40	30	20	10
By ethnic groups:								
Anglo	90	70	50	50	50	30	25	10
Hispano	90	50	50	60	30	30	20	15
By residence:								
Resident of rural area	95	75	50	60	40	30	20	0
Resident of urban area	90	60	50	40	60	40	25	20
By occupation:								
Farmer or rancher	95	85	60	60	30	25	10	5
Businessman	90	60	40	60	60	50	40	30
Professional/ Government official	90	40	40	50	50	50	40	10
Retiree/ Housewife	100	90	80	15	90	20	10	10

Note: ^a Ratings averaged on a scale of 0 to 100.

Source: Harbridge House, Inc., interviews with key informants, 1978.

assimilation into the English-speaking society. Hispanos regard Spanish as one basis of their cultural heritage. The other is the Roman Catholic Church which is not only a religious organization but the social focus of Hispanic communities. Since the majority of Anglos in the SEPA belong to various Protestant faiths, religious beliefs further distinguish the two groups. Both language and religion strengthen the social role of family units in Hispanic communities. "It is largely through the family that social control operates, although the church also occupies an important place in social control. Outside contacts and the breakdown of isolation, however, have served to lessen the hold of the family and the church on young people" (Johansen, 1948). Most important in weakening traditional values has been the integration of Hispanos into a growing, predominantly urban and Anglo economy. "Folk Spanish tradition has suffered as a result of the pull of economic forces from the interests of Spanish community life" (Borkovic, 1971).

Notwithstanding the still surviving distinctions between Anglo and Hispano, the most important differences among residents of the SEPA appear to be those between rural and urban populations, and more specifically those between ranchers and businessmen. Table 2.30 provides ratings of the importance of specific values obtained from key informant interviews. The differences in average ratings among farmers and ranchers, and those among businessmen, are revealing. The latter rate community relationships, academic achievement, personal development and economic development far more highly than the former, who stress the values of the land and religious faith. The data in Table 2.30 underscore the extent to which ranchers (and farmers) value independence and closeness to the land above chances for material advancement and personal gain.

Of course, some businessmen in enterprises linked to livestock ranching share the values (and attitudes) of ranchers. Feed lot operators, equipment and materials suppliers, and loan managers often have business and personal ties to ranching. Shared values are especially common in rural areas and small towns. In more populous communities like Alamogordo and Las Cruces, ranching represents a less significant part of the local economy, and one which is occasionally isolated from the mainstream of community feeling. Key informants in the vicinity of Las Cruces characterized that city and its environs as being split between "east side" and "west side." Farmers and ranchers on the so-called "west side" were said to live in older, lower income residential areas and in isolated rural districts. Government employees, and the businessmen and professionals associated with them, were felt to live on the so-called "east side" in modern, upper income residences near new, large shopping centers.

When further questioned about this "east-side"/"west-side" distinction in Las Cruces, interviewees indicated that their feeling was only a vague one and not related to specific issues. The perceived differences appeared to arise out of differing life-styles and values--those of a rural, western background on the one hand, and an urban, migrant background on the other.

TABLE 3.1

TOTAL PERSONAL INCOME BY MAJOR SOURCES, SOUTHWESTERN NEW MEXICO SEPA, 1976
(by place of work)

Sector	<u>Dona Ana County</u>		<u>Grant County</u>		<u>Hidalgo County</u>		<u>Luna County</u>	
	Dollar Value (000's)	Percent of Total	Dollar Value (000's)	Percent of Total	Dollar Value (000's)	Percent of Total	Dollar Value (000's)	Percent of Total
Agriculture								
Ranching	7,045	2.3	2,149	2.0	972	3.0	2,042	5.2
Farming & Forestry	29,946	9.9	129	0.1	1,237	3.9	3,862	9.7
Manufacturing	14,062	4.6	5,908	5.4	1,321	4.1	3,043	7.7
Mining	295	0.1	54,114	49.6	(165)	(0.5)	596	1.5
Construction	13,752	4.5	3,434	3.2	15,946	49.9	1,746	4.4
Wholesale & Retail Trade	38,909	12.8	9,965	9.1	3,860	12.1	8,288	20.9
Finance, Insurance & Real Estate	8,134	2.7	1,649	1.5	432	1.4	1,695	4.3
Transportation, Communication & Public Utilities	14,251	4.7	3,422	3.1	1,153	3.6	4,501	11.4
Services & Other Industries	31,153	10.2	6,529	6.0	3349	10.5	3,597	9.1
Government								
Federal Civilian	69,701	22.9	2,416	2.2	597	1.9	1,956	4.9
Federal Military	17,189	5.7	301	0.3	65	0.2	177	0.5
State and Local	59,691	19.6	19,074	17.5	3,161	9.9	8,120	20.5
Total	304,129	100.0	109,090	100.0	31,928	100.0 ^d	39,623	100.0 ^d

Notes: ^aWholesale trade not disclosed in 1976, so \$2,753,000 is partial for that category in that year. Data are not included in totals.

^bIndicates information not shown to avoid disclosure of confidential information for some industries. Data are included in totals.

^cTotal will not add due to non-disclosure in "Wholesale Trade" and "Other Industries" for Sierra County.

^dTotal may not add due to rounding.

Sources: ^cU.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System, 1978, except for "Agriculture", derived U.S. Department of Commerce, Bureau of the Census, Census of Agriculture: 1974, New Mexico, 1975.

3.0 ECONOMIC PROFILE

Five interrelated yet distinct components make up the economy of the SEPA. The most important is centered in the two leading cities of southwestern New Mexico, whose dominance as trade and service centers of local, and occasionally regional, significance is based upon government spending by federal authorities at Fort Bliss, Holloman Air Force Base and White Sands Missile Range, and by the state of New Mexico in connection with New Mexico State University. In contrast, the towns and villages of Grant County are dependent on extraction of copper and other metals at Santa Rita and other mines. Truth or Consequences and its vicinity, in Sierra County, and scattered small communities in other parts of the SEPA, like Cloudcroft and Virden, are resort and retirement centers, which are growing with the continued influx of new residents and new investment. Rural portions of the Rio Grande Valley are largely devoted to irrigated agriculture, particularly cotton production, as they have been for more than a century. Desert areas east and west of the river are chiefly characterized by cattle ranching, despite the limited carrying capacities of most types of range in what is an arid region.

Significant differences in the economies of each county in the SEPA are evident in two key indicators, income and employment. The four leading industries of southwestern New Mexico are government, which provides 42.5 percent of all income and 35.6 percent of all employment; trade, which supplies 11.5 and 19.3 percent respectively; and services, with 10.5 and 15.3 percent. This sectoral pattern is hardly uniform throughout the SEPA. For example, in Grant County mining supplies 49.6 percent of total income. However, because of the relative size of their populations and payrolls, Dona Ana and Otero Counties dominate income and employment figures for the SEPA as a whole. Regional economic patterns conform essentially to patterns in those two counties, and anomalous economic patterns existing elsewhere in southwestern New Mexico are not reflected in the aggregate data.

Appendix B details sources and methodologies employed in developing economic data.

3.1 Income

In 1976, total personal income in the SEPA was estimated by the Bureau of Economic Analysis to exceed \$698 million by place of work, and \$800 million by place of residence. More recent, but still incomplete, data from the New Mexico Employment Security Commission suggest that income between 1976 and 1978 has grown at a more rapid rate than inflation. Reported increases in earnings from employment covered by state unemployment insurance were between 10 and 16 percent, resulting in gains in aggregate real income of 4 to 10 percent. Table 3.1

TABLE 3.1 (Cont'd)

TOTAL PERSONAL INCOME BY MAJOR SOURCES, SOUTHWESTERN NEW MEXICO SEPA, 1976

Sector	Otero County		Sierra County		SEPA		New Mexico	
	Dollar Value (000's)	Percent of Total	Dollar Value (000's)	Percent of Total	Dollar Value (000's)	Percent of Total	Dollar Value (000's)	Percent of Total
Agriculture								
Ranching	1,383	0.7	2,563	12.8	16,155	2.3	118,869	2.5
Farming & Forestry	918	0.5	999	5.0	37,091	5.3	55,945	1.2
Manufacturing	15,227	7.9	96	0.5	39,657	5.7	320,346	6.8
Mining	170	0.1	702	3.5	55,712	8.0	372,780	8.0
Construction	8,034	4.2	696	3.5	43,608	6.2	349,146	7.5
Wholesale & Retail Trade	16,309	8.4	2,753 ^{a,b}	13.8	80,084	11.5	776,228	16.6
Finance, Insurance & Real Estate	3,972	2.1	804	4.0	16,686	2.4	178,352	3.8
Transportation, Communication & Public Utilities	7,784	4.0	1,185 ^b	5.9 ^b	32,296	4.6	368,434	7.9
Services & Other Industries	26,035	13.4	2,399 ^b	12.0	73,062	10.5	766,190	16.4
Government								
Federal Civilian	37,038	19.1	1,855	9.3	113,563	16.3	419,483	9.0
Federal Military	60,680	31.3	109	0.6	78,521	11.2	192,807	4.1
State and Local	16,091	8.3	5,581	27.9	111,718	16.0	766,675	16.4
Total	193,641	100.0	19,994 ^c	100.0 ^c	698,405 ^c	100.0	4,685,255	100.0 ^d

Notes: ^aWholesale trade not disclosed in 1976, so \$2,753,000 is partial for that category in that year. Data are not included in totals.

^bIndicates information not shown to avoid disclosure of confidential information for some industries. Data are included in totals.

^cTotal will not add due to non-disclosure in "Wholesale Trade" and "Other Industries" for Sierra County.

^dTotal may not add due to rounding.

Source: ^cU.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System, 1978, except for "Agriculture", derived U.S. Department of Commerce, Bureau of the Census, Census of Agriculture: 1974, New Mexico, 1975.

gives total personal income by county for 12 major sectors and for the economy as a whole. In the SEPA, the three subsectors which together show income from government payrolls produced \$303 million. Trade supplied an additional \$80.1 million and services, \$93.1 million. Within the year, income varied as much as 30 percent between quarters, with the most significant fluctuations being recorded in resort areas at the start and after the end of the winter and summer seasons, and in rural areas at the start and after the end of the summer season.

Agriculture in the SEPA contributed \$53.2 million to total personal income in 1976. Of this total, \$37.1 million or 69.7 percent was generated by the farming and forestry subsector. Forestry represents a minuscule fraction of this subsector; raising of cotton is the most important farm activity. Dona Ana and Luna Counties showed the most significant percentages in this subsector, with farming and forestry representing 9.9 percent of total income from all sectors in Dona Ana County and 9.7 percent in Luna County. By contrast, farming and forestry accounted for less than 1 percent of total income in Grant and Otero Counties, and only 1.2 percent of total income for the state of New Mexico as a whole. The ranching subsector provided \$16.2 million and represented 2.3 percent of total income in the SEPA, consistent with the state average of 2.5 percent. In Dona Ana, Grant, and Hidalgo Counties, the percentage of income generated by ranching was comparable to the SEPA and state averages, with a slightly higher percentage in Luna County and a lower percentage in Otero County. Ranching was most significant in Sierra County, where it supplied 12.8 percent of total income. Ranching in southwestern New Mexico is characterized by a large number of subsistence and small commercial operators. For example, in the ESA, 82.6 percent of all ranches were smaller than 200 animal units (AU's) in size; more than half had less than 70 AU's. With an estimated value of \$5.27 per animal unit month (AUM), subsistence ranches contributed less than \$1,000 each to total personal income, and clearly represent uneconomic units. As discussed in Section 2.0, many ranches are maintained as rural residences by operators with off-ranch jobs who seek to maintain a ranching life-style.

Per capita income in southwestern New Mexico grew by 122.3 percent between 1965 and 1976, from \$2,233 to \$4,964 in figures supplied by the Bureau of Economic Analysis. Data from 1960 suggest that this growth has been sustained steadily since that year. Per capita income has risen despite population growth, reflecting large gains in the total personal income over the same period estimated at more than 200 percent. Nonetheless, per capita income in the SEPA is only 95.2 percent of the state figure. Moreover, the region has, by this indicator, lost relatively in relation to New Mexico, generally, and in particular the Albuquerque metropolitan area. Table 3.2 outlines the changes in personal income in the period 1965-1976. As shown,

TABLE 3.2

PER CAPITA INCOME, SOUTHWESTERN NEW MEXICO SEPA, 1965-1976
(by place of residence)

<u>County</u>	<u>Per Capita Income 1965</u>	<u>Per Capita Income 1970</u>	<u>Per Capita Income 1976</u>	<u>Percent Increase 1965-1976</u>
Dona Ana	2,254	2,899	4,663	106.9
Grant	2,187	3,082	5,635	157.7
Hidalgo	1,751	2,733	5,209	197.5
Luna	2,468	2,951	4,825	95.5
Otero	2,270	3,047	5,303	133.6
Sierra	1,971	2,656	4,388	122.6
SEPA	2,233	2,952	4,964	122.3
New Mexico	2,204	3,092	5,213	136.5

Source: U.S. Department of Commerce, Bureau of Economic Analysis,
Regional Economics Information System, 1978.

TABLE 3.3

MEDIAN FAMILY INCOME AND INCOME DISTRIBUTION, SOUTHWESTERN NEW MEXICO SEPA, 1970

<u>County</u>	<u>Median Family Income</u>	<u>Percent of Families with Incomes of:</u>							
		<u>Less Than Poverty Level^a</u>	<u>Less Than \$2000</u>	<u>\$2000- \$3999</u>	<u>\$4000- \$5,999</u>	<u>\$6000- \$7,999</u>	<u>\$8000- \$9,999</u>	<u>\$10,000- \$14,999</u>	<u>\$15,000 or over</u>
Dona Ana	\$ 7,395	20.5	8.8	14.1	16.6	14.8	11.8	20.2	13.7
Grant	7,898	11.9	5.9	9.0	13.6	22.7	17.6	20.8	10.4
Hidalgo	6,568	21.7	12.2	13.3	17.8	19.5	13.4	14.4	9.4
Luna	6,472	20.5	9.4	17.3	18.1	16.9	9.2	19.0	10.1
Otero	8,117	12.3	6.6	9.0	15.2	18.4	14.1	22.8	13.9
Sierra	4,833	23.9	12.4	27.0	20.1	14.1	9.0	11.3	6.1
SEPA	7,401	17.6	8.1	12.9	16.1	17.2	13.0	20.2	12.5
New Mexico	7,849	18.5	9.5	12.4	14.1	15.1	13.1	21.0	14.8

Note: ^a Poverty Level Threshold for all families in 1969 was \$3,388.

Source: U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Social and Economic Characteristics, 1973.

TABLE 3.4

TOTAL EMPLOYMENT BY MAJOR SECTORS, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Sector</u>	<u>Dona Ana County</u>		<u>Grant County</u>		<u>Hidalgo County</u>		<u>Luna County</u>	
	<u>Number</u> <u>Employed</u>	<u>Percent</u> <u>of Total</u>	<u>Number</u> <u>Employed</u>	<u>Percent</u> <u>of Total</u>	<u>Number</u> <u>Employed</u>	<u>Percent</u> <u>of Total</u>	<u>Number</u> <u>Employed</u>	<u>Percent</u> <u>of Total</u>
Agriculture ^a								
Ranching	561	1.9	278	3.2	197	7.2	234	5.5
Farming & Forestry	2,347	7.9	60	0.7	161	5.9	377	8.8
Manufacturing	1,395	4.7	351	4.0	71	2.6	453	10.6
Mining	16	0.1	2,887	33.2	5	0.2	35	0.8
Construction	1,371	4.6	239	2.7	810	29.9	142	3.3
Transportation, Communications & Public Utilities	1,137	3.8	223	2.6	69	2.5	274	6.4
Trade	5,221	17.5	1,195	13.7	485	17.8	997	23.2
Finance, Insurance & Real Estate	803	2.7	170	2.0	40	1.5	169	3.9
Services & Miscellaneous	3,700	12.4	836	9.6	390	14.3	422	9.8
Government								
Federal Civilian	4,464	15.0	176	2.0	40	1.5	114	2.7
Federal Military	1,980	6.6	145	1.7	34	1.3	86	2.0
State & Local	6,786	22.8	2,141	24.6	417	15.3	988	23.0
Total	29,781	100.0	8,701	100.0	2,719	100.0	4,291	100.0

Note: ^aFigures derived from U.S. Census of Agriculture: 1974.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System, 1978.

TABLE 3.4 (Cont'd)

<u>TOTAL EMPLOYMENT BY MAJOR SECTORS, SOUTHWESTERN NEW MEXICO SEPA, 1976</u>								
<u>Sector</u>	<u>Otero County</u>		<u>Sierra County</u>		<u>SEPA</u>		<u>New Mexico</u>	
	<u>Number Employed</u>	<u>Percent of Total</u>	<u>Number Employed</u>	<u>Percent of Total</u>	<u>Number Employed</u>	<u>Percent of Total</u>	<u>Number Employed</u>	<u>Percent of Total</u>
Agriculture	285	1.5	247	11.4	1,802	2.7	8,424	2.07
Ranching	223	1.2	130	6.0	3,298	4.9	7,076	1.75
Farming & Forestry	1,259	6.7	9	0.4	3,538	5.3	30,300	7.47
Manufacturing	12	0.1	69	3.2	3,024	4.5	21,500	5.30
Mining	713	3.8	67	3.1	3,342	5.0	26,100	6.44
Construction								
Transportation, Communications & Public Utilities	576	3.1	93	4.3	2,372	3.6	23,400	5.77
Trade	2,318	12.4	354	16.3	10,570	15.9	90,400	22.30
Finance, Insurance & Real Estate	411	2.2	85	3.9	1,678	2.5	17,000	4.19
Services & Miscellaneous	2,963	15.8	299	13.7	8,610	13.0	73,300	18.08
Government								
Federal Civilian	2,483	13.2	131	6.0	7,408	11.1	39,605	9.77
Federal Military	5,679	30.3	51	2.3	7,975	12.0	14,446	3.56
State & Local	1,822	9.7	641	29.4	12,795	19.5	53,949	13.30
Total	18,744	100.0	2,176	100.0	66,412	100.0	405,500	100.00

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System, 1978.

there are significant variations in income patterns by county, between the highest, Grant County, at \$5,635 per person, and lowest, Sierra County, at \$4,388 per person. The former figure is 13.5 percent higher than the average for the SEPA, and reflects the local importance of jobs in the mining sector which have the highest average wages of any economic sector.

Per capita income in the SEPA is not only lower than the state average, but also lower than averages for other western states. In 1976, Nevada had a per capita income of \$7,337, 40.7 percent higher than New Mexico and 47.8 percent higher than the SEPA. Colorado (\$6,723), Montana (\$5,600), Arizona (\$5,218), Idaho (\$5,726), and Utah (\$5,482) also had higher per capita income figures.

The 1970 Census showed a median family income for the SEPA of \$7,401. The returns from the last Census suggest a greater differential in family incomes between counties than exists in the most recent data for per capita income. As given in Table 3.3, the median family income in Sierra County was \$4,833. The comparable figure for Otero County, \$8,117, was 67.9 percent higher. Other counties had median family incomes between these two extremes. As it does in per capita incomes, the SEPA lagged behind New Mexico as a whole in median family incomes. Only Grant and Otero Counties exceeded the New Mexico median in 1970, and the figure for the SEPA was 94.3 percent of the \$7,849 median family income for the state reported by the Bureau of the Census.

3.2 Employment

Nearly 66,500 persons were employed in the six counties of the SEPA in 1976, according to data obtained from the New Mexico Employment Security Commission. This employment represented a gain of 3.6 percent over the total number of jobs in the previous year. Table 3.4 outlines job-holding by 12 major economic sectors for each county and for the SEPA as a whole. Sectoral patterns of employment may be seen to vary somewhat from income distribution by sector, as given in Table 3.1. Government and mining represented a smaller percentage of employment than either sector did of income, reflecting the relatively high wages paid by employers in these industries. In contrast, trade and services represented a relatively greater percentage of employment than of income, indicating the low wages common in both sectors. Figure 3.1 suggests the differences between counties and the significance of each sector in the SEPA.

Agriculture in the SEPA provided 5,100 of all jobs held in the SEPA in 1976, or 7.6 percent of total employment. The farming and forestry subsector accounted for 4.9 percent of employment in the SEPA, more than three times as much as the state percentage for this subsector. Employment in agriculture was most significant in Sierra County,

FIGURE 3.1

TOTAL EMPLOYMENT BY MAJOR SECTORS, SOUTHWESTERN NEW MEXICO SEPA, 1976

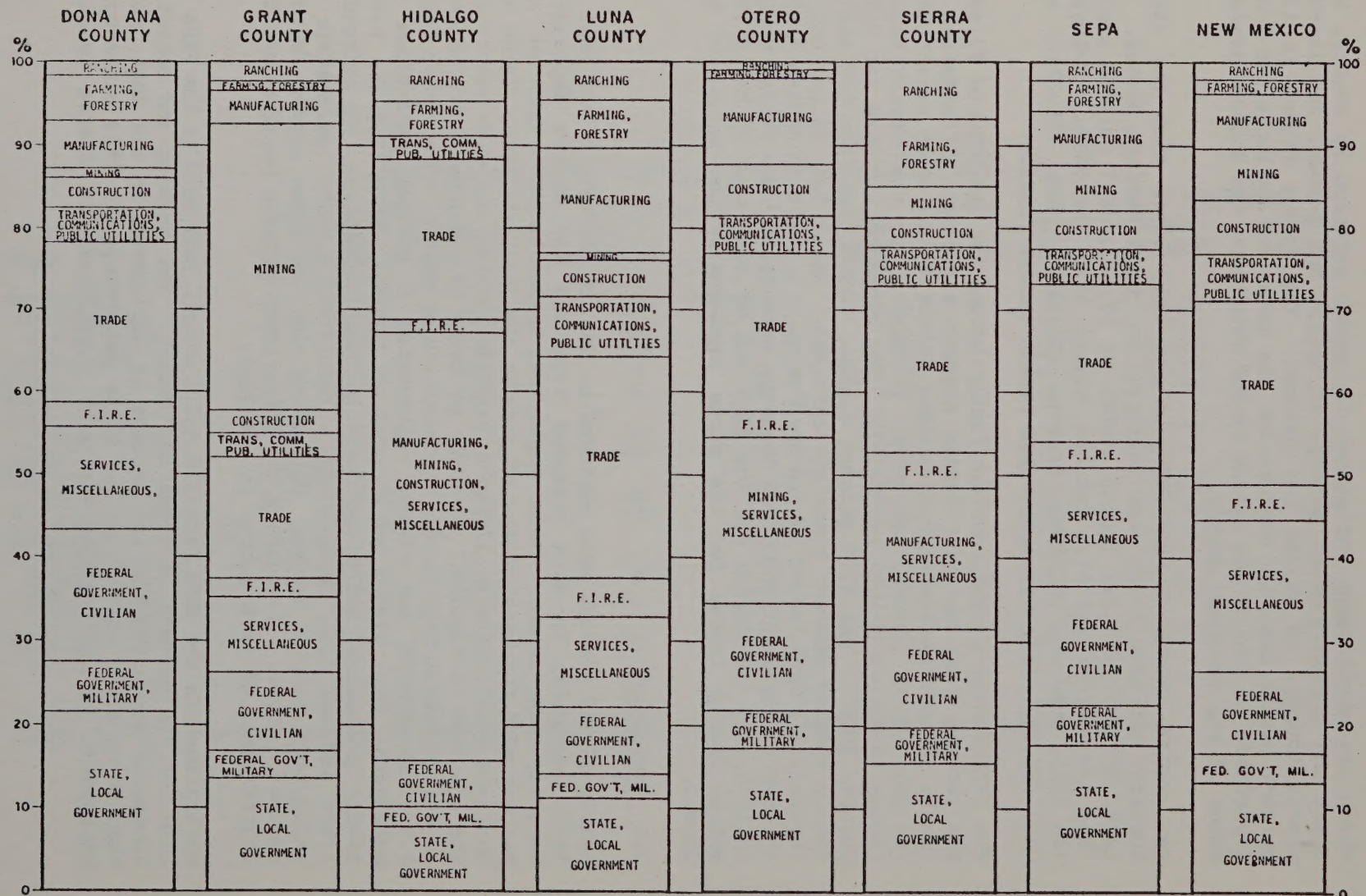


TABLE 3.5

RATE OF UNEMPLOYMENT BY PLACE OF RESIDENCE,
SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>County</u>	<u>All Workers^a</u>	<u>Anglo^b</u>	<u>Hispano^b</u>	<u>Total Minority^b</u>
Dona Ana	9.4	9.4	12.8	12.5
Grant	7.3	7.3	8.3	8.2
Hidalgo	6.8	6.8	11.0	11.0
Luna	10.1	9.7	12.5	13.3
Otero	9.1	8.3	6.8	10.3
Sierra	6.6	6.7	10.9	10.8
SEPA	8.6	8.7	11.1	11.4
New Mexico	9.1	8.7	11.8	12.8

Source: ^a New Mexico Employment Security Commission, "Table A-Civilian Labor Force, Employment, Unemployment Rate 1976", 1977.

^b Harbridge House, Inc., 1978 estimates on the basis of formulae used by New Mexico Employment Security commission for determinations of Affirmative Action Information Figures; formulae utilize 1970 census data to obtain minority employment ratios.

TABLE 3.6

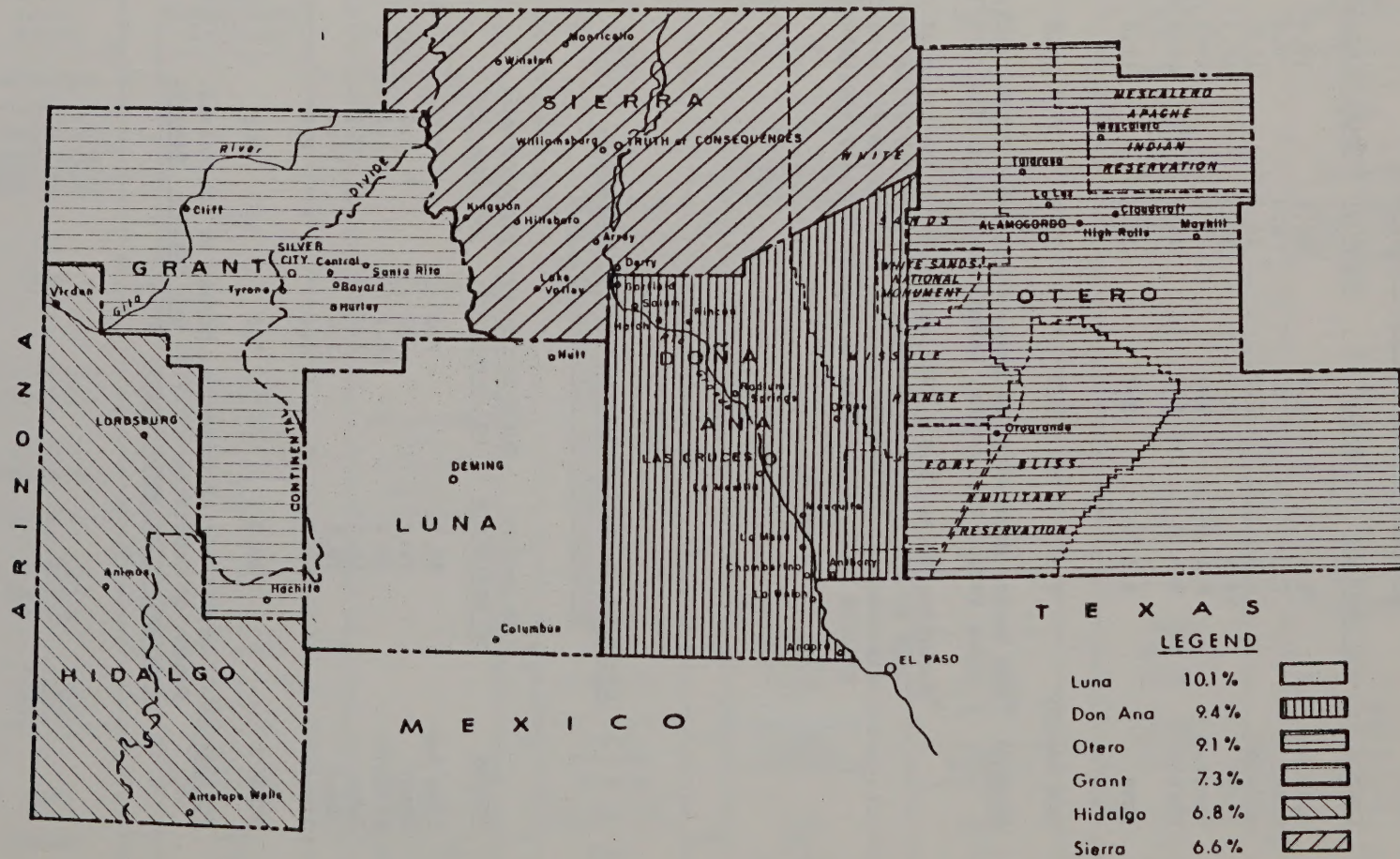
LOCATION OF EMPLOYMENT BY PLACE OF RESIDENCE,
SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>County</u>	<u>In County of Residence</u>	<u>Outside County of Residence</u>	<u>Place of Work Not Reported</u>
Dona Ana	83.5	7.0	9.5
Grant	92.2	2.2	5.6
Hidalgo	68.5	18.3	13.2
Luna	83.6	8.7	7.7
Otero	79.5	3.6	16.9
Sierra	89.6	4.4	6.0
SEPA	83.3	5.8	10.9

Source: U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, New Mexico: General Population Characteristics, 1973.

FIGURE 3.2

RATE OF UNEMPLOYMENT BY PLACE OF RESIDENCE
SOUTHWESTERN NEW MEXICO SEPA, 1976



Sources: New Mexico Employment Security Commission, "Table A-Civilian Labor Force, Employment, Unemployment Rate 1976", 1977.

where farming and forestry represented 6.0 percent and ranching accounted for 11.4 percent of total employment. The percentage of employment provided by farming and forestry was also higher than the SEPA average in Dona Ana, Hidalgo, and Luna Counties, and below the SEPA average in Grant and Otero Counties. Hidalgo and Luna Counties followed Sierra County with the highest percentages of ranching employment. Grant County had a slightly lower percentage of ranching employment and ranching accounted for only 1.9 percent of employment in Dona Ana County and 1.5 percent in Otero County.

Agricultural employment in general, and ranch employment in specific, is subject to seasonal variations. A typical commercial cattle ranch in the SEPA is estimated to require between 30 and 50 man-days of labor per month. In most cases, this labor is supplied by the ranch owner-manager and his family. Only ranchers with over 300 head of cattle usually hire more than seasonal labor, and large ranches with more than 700 head of cattle often employ two men year-round. (Sheep ranchers with over 1,500 head employ a full-time man, plus additional labor during lambing, docking, and shearing.) Ranch employment peaks in March during calving and April during branding. Another peak occurs in September and October during herd roundup, selection of calves for sale, and shipping. On sheep ranches, the greatest demand for labor occurs in March, April, and May, and again peaks in October (Southwest Research and Development Corporation, 1977).

Non-agricultural employment has been growing rapidly in recent years, along with population increases. In 1970, there was a total of 46,195 employed persons in the SEPA. After six years, that number had grown by more than 30 percent. This increase represents an effective annual growth rate which is 18.3 percent higher than the comparable rate for New Mexico as a whole. However, growth has been slowed since 1970 by two periods of recession. The effects of the second and most recent still linger in the SEPA and are apparent in the unemployment rates shown in Table 3.5. The six counties in southwestern New Mexico were characterized by an 8.6 percent rate of joblessness in 1976. This rate is lower than the state average of 9.1 percent, but still high. Unemployment rates among Hispanics and members of other minority groups average 11.4 percent, higher than for all workers, as shown in Table 3.5. Differences in unemployment rates between different parts of the SEPA are shown in Figure 3.2.

Employment in the SEPA is affected by seasonal patterns, with unemployment most often peaking in summer months, with the release of high school and college students from classes. Major employers in the SEPA are listed below, together with an indication of the nature of their business and their location. Only employers with more than 100 employees at one location have been included.

DONA ANA COUNTY

City of Las Cruces	government	Las Cruces
County of Dona Ana	government	Las Cruces
L'EGGS Products, Inc.	hosiery manufacture	Mesilla Park
Memorial General Hospital	health care	Las Cruces
National Aeronautics & Space Administration	government	Organ
New Mexico State University	education	Las Cruces
Wells Lamont Corporation	clothing manufacture	Las Cruces

GRANT COUNTY

American Smelting & Refining Company	mining, processing	Vanadium
County of Grant	government	Silver City
Fort Bayard Medical Center	health care	Bayard
Hillcrest General Hospital	health care	Silver City
Kennecott Copper Company	mining, processing	Hurley
Phelps Dodge Company	mining, processing	Tyrone
UV Industries	mining, processing	Hanover
Western New Mexico University	education	Silver City

HIDALGO COUNTY

Brown & Root, Inc.	contract construction	Lordsburg
Federal Resources Corporation	mining, smelting	Lordsburg

LUNA COUNTY

Luna Cotton Cooperative	agricultural service	Deming
Spring City Knitting Cooperative	clothing manufacture	Deming

OTERO COUNTY

City of Alamogordo	government	Alamogordo
Gerald Champion Memorial Hospital	health care	Alamogordo
Holloman Air Force Base	government	Alamogordo
Mescalero Apache Indian Tribe	government	Mescalero
New Mexico School for the Visually Handicapped	education	Alamogordo
Otero Mills	lumber, wood products manufacture	Alamogordo
Presto Products Manufacturing Company	appliance manufacture	Alamogordo
White Sands Missile Range	government	Alamogordo

SIERRA COUNTY

Carrie Tingley Hospital for Crippled Children	health care	Truth or Consequences
St. Ann's Hospital	health care	Truth or Consequences

Despite the proximity of El Paso, a major metropolitan center with a large number of jobs, less than 20 percent of residents in each county of the SEPA were reported to commute outside their county of residence in 1970. Figures for each county are shown in Table 3.6.

3.3 Consumption and Investment

In the 1972 Census of Retail Trade, the six counties in southwestern New Mexico were reported to have had retail sales of more than \$300 million. As shown in Table 3.7, Dona Ana County represented 44.3 percent of this retail trade, with almost all of this being located in Las Cruces. Otero County contributed 21.3 percent to total sales in the SEPA. Both these percentages represent shares which are relatively smaller than these counties' proportions of the six-county population. By contrast, Grant, Hidalgo, and Luna Counties contributed relatively more to total sales than their relative sizes in terms of regional population. Thus Grant had 15.4 percent of the dollar volume of retail transactions, but only 13.6 percent of the total number of SEPA inhabitants. These differences suggest the role of the city of El Paso and El Paso County, Texas, as a retail center for adjacent portions of the SEPA, principally Dona Ana and Otero Counties. In areas which are not near metropolitan shopping centers, relative retail sales are higher.

The state of New Mexico falls within the spheres of interest of three commercial and financial centers: Denver, Dallas, and El Paso. According to the Rand-McNally Commercial Atlas and market studies by researchers at New Mexico State University, all six counties in the SEPA lie within the region dominated by El Paso. Indeed, the El Paso Chamber of Commerce describes Las Cruces as one of El Paso's five suburban shopping centers. The full extent of the influence of El Paso on the SEPA is suggested by Table 3.8. The location quotients shown suggest whether the value of goods and services produced locally is greater than would be predicted using the national input-output model, or whether it is less. Values equal to one would correspond to the national average in production and consumption by sector. Industries producing more goods and services than would be predicted comprise export sectors and have values greater than one; while those producing less are import sectors, dependent on purchases of goods and services from sources outside the SEPA and have values less than one. The table indicates the extent to which residents of southwestern New Mexico go outside the region to obtain goods and services, particularly the latter. Table 3.8 shows that production and consumption in the government sector exceed the national average in most parts of the SEPA, but that other sectors, trades and services especially, are dependent on imports.

TABLE 3.7

RETAIL SALES, BY COUNTY,
SOUTHWESTERN NEW MEXICO SEPA, 1972

<u>County</u>	<u>Total Retail Sales (in \$1,000)</u>	<u>Percent of Total SEPA Sales</u>
Dona Ana County	\$133,072	44.3
Las Cruces	120,862	40.2
Remainder of County	12,210	4.1
Grant County	46,113	15.4
Bayard	4,465	1.5
Silver City	36,722	12.3
Remainder of County	4,926	1.6
Hidalgo County	13,774	4.6
Lordsburg	13,221	4.4
Remainder of County	553	0.2
Luna County	30,896	10.3
Deming	29,563	9.9
Remainder of County	1,333	0.4
Otero County	64,020	21.3
Alamogordo	58,543	19.5
Tularosa	2,508	0.8
Remainder of County	2,969	1.0
Sierra County	12,240	4.1
Truth or Consequences	10,718	3.6
Remainder of County	1,522	0.5
SEPA	300,115	100.0

Source: U.S. Department of Commerce, Bureau of the Census,
Census of Retail Trade: 1972, New Mexico, 1975.

TABLE 3.8

INCOME LOCATION QUOTIENTS BY MAJOR SECTOR, SOUTHWESTERN NEW MEXICO SEPA, 1975

Sector	Dona Ana	Grant	Hidalgo	Luna	Otero	Sierra
Agriculture	3.6048	1.3253	4.1221 ^b	5.427	.2729	5.1591
Manufacturing	.1736	^a	^b	.2447	.3048	.0273
Mining	.0606	29.4053	.1482	D	.0790	2.2800
Contract Construction	.7740	.9607	D	.6025	.9145	.8930
Wholesale & Retail Trade	.7001	.5881	.5808	1.2299	.4774	.7999
Finance, Insurance & Real Estate	.4731	.3523	.1923	.8034	.4536	1.0908
Transportation, Communica- tions & Public Utilities	.7442	.4583	.3990	1.3606	.5116	.7269
Services	.5332	D	D	.5612	.7275	.6132
Other	1.5560	.2841	.5790	D	.6710	L
Government						
Federal Civilian	5.4654	.5996	.3588	1.0738	4.2917	2.3386
Federal Military	3.0918	.2804	.1533	.4349	15.4557	.5434
State & Local	1.6075	1.5821	.6440	1.6628	.6691	2.2926

Notes: ^a(D) Indicates data not shown to avoid disclosure of confidential information. Data are included in totals.

^b(L) Indicates less than \$50,000. Data are included in totals.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System, 1976.

TABLE 3.9

FINANCIAL INSTITUTIONS, RESOURCES AND DEPOSITS, SOUTHWESTERN NEW MEXICO SEPA, 1976

County	National Bank		State Bank		Savings and Loan		Credit Union	
	Resources	Deposits	Resources	Deposits	Resources	Deposits	Resources	Deposits
Dona Ana	110,877,000	101,868,000	69,600,000	62,812,000	73,124,574	66,115,952	216,812	181,329
Grant	27,106,000	25,055,000	22,134,000	20,135,000	470,354	--	221,173	196,429
Hidalgo	15,542,000	14,284,000	--	--	--	--	--	--
Luna	19,568,000	17,527,000	27,718,000	25,517,000	40,336,152	36,867,373	246,501	221,576
Otero	33,781,000	30,943,000	37,879,000	35,005,000	33,598,866	28,325,622	2,113,202	1,536,951
Sierra	21,800,000	20,165,000	5,758,000	5,129,000	--	--	--	--
SEPA	228,674,000	209,842,000	789,489,000	148,598,000	147,529,946	131,308,947	2,797,688	2,136,285
New Mexico	2,296,708,000	2,051,878,000	1,401,962,000	1,267,854,000	1,414,037,510	1,235,597,277	100,661,995	86,823,656

Source: New Mexico Department of Banking, Sixty Second Annual Report, 1976.

Table 3.9 outlines the resources and deposits of financial institutions in the SEPA. The assets of banks, savings and loan associations and credit unions in southwestern New Mexico equaled \$6,605 per inhabitant in 1976. This compares to \$4,440 per inhabitant in the state as a whole. Furthermore, the SEPA is served by financial institutions in El Paso, whose resources and deposits are not shown in Table 3.9, but are more than ten times greater in size than those existing in all six counties in southwestern New Mexico.

4.0 RESOURCE INDUSTRY ANALYSIS

Public lands represent a resource base which is utilized in several ways: by the grazing of livestock, by the harvesting of timber, by the mining of minerals, and by various uses for recreation. These resource activities, of course, occur on lands held in all types of ownership and under all forms of administration. Land uses for all lands in the SEPA are given in Table 4.1. As shown in Table 4.1, the predominant land use in southwestern New Mexico is grazing. Range and noncommercial timber lands accounted for more than four-fifths of the SEPA's total acreage. Public lands administered by the BLM represent a six-county average of 30.6 percent of all lands (see Section 1.0), while range and noncommercial timber lands represent an even larger percentage of this BLM acreage.

As noted in Section 3.0, ranching represents a significant economic activity in southwestern New Mexico. Total livestock forage requirements in the SEPA in 1976 were estimated to equal 2,904,600 cattle animal unit months (AUM's) and 159,600 sheep AUM's. In the SEPA as a whole, public lands administered by the BLM accounted for 19.6 percent of all AUM's. Dependencies by county are shown in Table 4.2. Direct employment related to grazing on public lands is shown in Table 4.3. The personal income to permittees from BLM forage in 1976-1977 has been estimated at approximately \$5.27 per cattle AUM. This is approximately 20 to 40 percent more than in most previous studies. As given in Section 3.0, personal income from cattle and sheep ranching in the SEPA was calculated at \$16.2 million in 1976, of which \$3.0 million was from public lands. This amount was one-quarter the total income contribution from public lands in New Mexico as a whole. Income from the grazing of livestock on public lands is shown in the summary of resource industries, Table 4.4.

Forestry is relatively insignificant in the economy of southwestern New Mexico. The only commercial production of timber and forest products occurs in Otero County, where harvesting of timber occurs on the Lincoln National Forest and the Mescalero Apache Indian Reservation. No commercial forest production presently draws on the estimated 10 millions of board feet of live saw timber on public lands administered by the BLM (Southwest Research & Development, 1977).

Mining of certain metals and materials is a significant economic activity in parts of the SEPA, particularly Grant and Hidalgo Counties. Among the minerals produced are gold, silver, copper, lead, and zinc; and building stone, sand, and gravel. There is no present production of petroleum, natural gas, uranium, or coal in the SEPA although there are potential areas of oil and gas reserves in the region which are classified as promising (Class I) and a portion of the Sierra Blanca Coal Field extends into northern Otero County. Neither oil and gas nor coal reserves in the SEPA appear likely to

TABLE 4.1

LAND USE, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Land Use</u>	<u>Dona Ana County</u>		<u>Grant County</u>		<u>Hidalgo County</u>		<u>Luna County</u>	
	<u>Acres</u>	<u>Percent of Total</u>	<u>Acres</u>	<u>Percent of Total</u>	<u>Acres</u>	<u>Percent of Total</u>	<u>Acres</u>	<u>Percent of Total</u>
Inland Waters	640	0.0	488	0.0	16,074	0.7	0	0.0
Parks and preserves	110,385	4.5	1,880	0.1	40	0.0	980	0.1
Commercial timber	438	0.0	110,893	4.4	11,666	0.5	0	0.0
Grazing land	1,569,744	64.5	2,379,985	93.7	2,122,383	96.2	1,794,008	94.8
Noncommercial timber	11,270	0.5	718,896	28.3	210,624	9.5	17,730	0.9
Range land	1,558,474	64.0	1,661,089	65.4	1,911,759	86.7	1,776,278	93.9
Crop land	98,310	4.0	8,600	0.3	35,230	1.6	67,140	3.5
Irrigated	98,310	4.0	7,760	0.3	35,230	1.6	67,140	3.5
Dry	0	0.0	840	0.0	0	0.0	0	0.0
Defense	611,195	25.1	5	0.0	0	0.0	2,081	0.1
Urban	28,000	1.2	27,955	1.1	10,470	0.5	17,820	0.9
Roads	15,848	0.7	10,994	0.4	10,217	0.5	10,451	0.6
Total	2,434,560	100.0	2,540,800	100.0	2,206,080	100.0	1,892,480	100.0

Source: Information provided by the New Mexico Interstate Stream Commission, 1978.

TABLE 4.1 (Cont'd)

LAND USE, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Land Use</u>	<u>Otero County</u>		<u>Sierra County</u>		<u>SEPA</u>		<u>New Mexico</u>	
	<u>Acres</u>	<u>Percent of Total</u>	<u>Acres</u>	<u>Percent of Total</u>	<u>Acres</u>	<u>Percent of Total</u>	<u>Acres</u>	<u>Percent of Total</u>
Inland Waters	0	0.0	39,477	1.5	56,679	0.4	151,500	0.3
Parks and preserves	90,216	2.1	51,666	1.9	255,167	1.6	591,901	0.8
Commercial timber	493,305	11.6	40,346	1.5	656,648	4.1	6,269,160	8.1
Grazing land	2,221,069	52.3	2,027,591	75.1	12,114,780	75.6	63,727,953	81.8
Noncommercial timber	360,067	8.5	313,194	11.6	1,631,781	10.2	13,678,061	17.6
Range land	1,861,002	43.8	1,714,397	63.5	10,482,999	65.4	50,049,892	64.2
Crop land	18,806	0.4	8,840	0.3	236,926	1.5	2,678,160	3.4
Irrigated	17,706	0.4	8,840	0.3	234,986	1.5	1,255,320	1.6
Dry	1,100	0.0	0	0.0	1,940	0.0	1,422,840	1.8
Defense	1,376,071	32.4	513,143	19.0	2,502,495	15.6	3,268,572	4.2
Urban	33,623	0.8	10,652	0.4	128,520	0.8	738,798	0.9
Roads	15,230	0.4	8,445	0.3	71,185	0.4	440,196	0.6
Total	4,248,320	100.0	2,700,160	100.0	16,022,400	100.0	77,866,240	100.0

Source: Information provided by the New Mexico Interstate Stream Commission, 1978.

TABLE 4.2

ACTIVE GRAZING USE BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>County</u>	<u>Ranch Operators</u>		<u>Total Cattle and Sheep Forage Requirements^h</u>		<u>BLM Forage Production^g (Grazing Permits)</u>		<u>Recent Dependency on BLM Forage</u>
	<u>Total Active Ranchers^f</u>	<u>BLM Grazing Permits^{a,g}</u>	<u>Cattle AUM's^b (Active Use)</u>	<u>Sheep AUM's^c (Active Use)</u>	<u>Cattle AUM's (Active Use)</u>	<u>Sheep AUM's (Active Use)</u>	
Dona Ana	150	70	352,800	3,600	92,541	e	26.2
Grant	140	74	717,600	d	42,655	e	5.9
Hidalgo	96	118	574,800	d	117,895	e	20.5
Luna	101	81	466,800	d	88,581	e	19.0
Otero	153	110	403,800	156,000	107,879	15,936	25.5
Sierra	102	118	388,800	d	77,462	e	19.9
SEPA	742	571	2,904,600	159,600	572,013	15,936	19.6

Notes: ^aDouble-counting exists with some operators holding two permits.

^bAll cattle, less milk cows, as reported on 1 January 1977, times 12.

^cAll sheep, as reported on 1 January 1977, times 12; for equivalent in cattle AUM's, divide by 5.

^dLess than 300 head of sheep were reported in these four counties on 1 January 1977.

^eNo grazing permits for sheep issued in these counties.

Sources: ^fNew Mexico State University, Agricultural Extension Service, 1978.

^gU.S. Department of the Interior, Bureau of Land Management, Summary of Grazing Permittees, 1977.

^hNew Mexico State University, New Mexico Agricultural Statistics, 1977.

TABLE 4.3

RANCHING, AGRICULTURAL, AND TOTAL EMPLOYMENT, SOUTHWESTERN NEW MEXICO SEPA, 1976

County	Ranching Employment ^{a,b}	Total Agricultural Employment ^c	Ranching, Percent of Total Agricultural Employment	Total Employment All Sectors	Ranching, Percent of Total Total Employment All Sectors	Ranching, Employment Dependent on Public Lands
Dona Ana	561	2,908	19.3	29,781	1.9	--
Grant	278	338	82.2	8,701	3.2	--
Hidalgo	197	358	55.0	2,719	7.2	--
Luna	234	611	38.3	4,291	5.5	--
Otero	285	508	56.1	18,744	1.5	--
Sierra	247	377	65.5	2,176	11.4	--
SEPA	1,802	5,100	35.3	66,412	2.7	230
New Mexico	8,424	15,500	54.3	405,500	2.1	--

Note: ^a $\frac{\text{Number of cattle farms} + \text{Total income derived from cattle and calves}}{\text{Total number of farms} + \text{Total agricultural income}} \times \text{Total agricultural employment} = \text{Ranching employment}$
2

Source: ^b U.S. Department of Commerce, Bureau of the Census, Census of Agriculture: 1974, New Mexico, 1977.

^c New Mexico Employment Security Commission, Labor Information Series, 1978.

TABLE 4.4

RESOURCE INDUSTRY ANALYSIS, SOUTHWESTERN NEW MEXICO SEPA, 1976

Resource Industry	Quantity of Regional Production		Regional Income Total Dollar Value	U.S. Bureau of Land Management Resource Significance		
	Physical - Economic (Dollars)			Amount Produced	No. of Initial Producers/Users	Regional Industry Dependency
Ranching						
Forage Production	3,064,200	AUM's ^a \$ 36,384,000	\$16,155,000	587,949 AUM's	571	19.2
Forestry						
Sawlog Production	30,200	mbf ^b \$ 6,040,000	\$ 1,529,180	0	0	--
Mining						
Leasable Minerals	0	0	0	0	0	--
Locatable Minerals	210,000	tons \$210,787,300	\$54,731,090	0	0	--
Saleable Minerals	2,350,000	tons \$ 3,777,800	\$ 980,910	913,790	tons 16	38.9
Recreation						
Bird Hunting	79,090	vsd ^c \$ 481,660	\$ 143,945	19,770 vsd	16,480	25.0
Big Game Hunting	84,115	vsd \$ 2,035,580	\$ 971,530	16,820 vsd	6,725	20.0
General Outdoor Recreation	2,799,070	vsd \$ 45,529,375	\$11,616,135	307,900 vsd	n.a.	11.0

TABLE 4.4 (Cont'd)

RESOURCE INDUSTRY ANALYSIS, SOUTHWESTERN NEW MEXICO SEPA, 1976

Resource Industry	U.S. Bureau of Land Management Resource Significance				
	Direct Income Effect		Regional Income Effect	Regional Income Dependency	1990-Projected Demand
	Per Unit (Dollars)	Total Dollars			
Ranching					
Forage Production	\$ 5.27 AUM	\$3,098,491	\$ 9,020,017	1.3	590,456 AUM's (low)
Forestry					752,575 AUM's (high)
Sawlog Production	--	--	--	--	--
Mining					
Leasable Minerals	--	--	--	--	--
Locatable Minerals	--	--	--	--	--
Saleable Minerals	\$ 0.42 ton	\$ 381,574	\$ 1,072,225	0.2	1,005,170 tons
Recreation					
Bird Hunting	\$ 1.80 vsd	\$ 35,985	\$ 51,745	0.0	44,382 vsd
Big Game Hunting	\$11.55 vsd	\$ 194,306	\$ 279,410	0.0	35,872 vsd
General Outdoor Recreation	\$ 4.10 vsd	\$1,277,775	\$ 1,744,160	0.1	422,780 vsd

Notes: ^aAUM's - animal unit months
^bmbf - millions of board feet
^cvsd - visitor days

Source: Harbridge House, Inc., 1978.

undergo large-scale development, however. No metals are mined on public lands. Potential reserves exist throughout the SEPA, but would be patented and removed from BLM administration prior to mine investment. Materials produced from public lands are thus limited to building stone, sand, and gravel, as shown in Table 4.4.

Outdoor recreation in the SEPA consists of a wide range of sports and leisure-time activities, of which several occur on public lands. Included in Table 4.4 in the category of general outdoor recreation are sightseeing, picnicking, camping, backpacking, hiking, four-wheeling, trail-biking, and birdwatching, as well as more particular activities such as caving, rock climbing, rockhounding, sport shooting, and horseback riding. Bird and big game hunting are shown separately. Approximations of recreational use of public lands were developed from state information on recreational facilities and wildlife habitat. With actual surveys of use of lands administered by the BLM, estimates will undoubtedly be altered. Appendix C outlines the assumptions used in developing these estimates.

Table 4.4 outlines contributions to regional income from resource industries utilizing public lands. The most significant activity is the grazing of livestock, which directly and indirectly generated more than \$10.0 million in personal income, 1.4 percent of the total for the SEPA.

5.0 COMMUNITY INFRASTRUCTURE

Community facilities and services in most parts of the SEPA are adequate to meet present needs. Exceptions exist in isolated rural areas and growing urban communities. Towns and villages of fewer than 3,000 inhabitants, and unincorporated farming and ranching areas, often lack many of the services offered in cities and suburbs. Furthermore, elements of community infrastructure are frequently in deteriorated condition, as a result of declining levels of population and diminished local government resources. By contrast, urban communities, such as Alamogordo and Las Cruces, the two growth centers of the SEPA, are experiencing mounting new demands on all facilities and services, due to annual increases in the number of inhabitants. Additional residents are requiring expanded capital spending and program development in order to maintain basic components of community infrastructure.

In the subsections which follow, differences in the conditions of facilities and services in rural and urban areas are noted. Components of infrastructure are analyzed in all cases by county and by municipality. Where particular problems exist in unincorporated communities, these are also discussed. Relationships between community needs and public lands are outlined in the conclusion of each subsection.

5.1 Governmental Responsibilities, Tax Base and Public Finances

Seven levels of government operate in the SEPA, and the jurisdictions of federal, state, regional, county, municipal, special district and tribal agencies often overlap. The number of governments is larger in urban areas than in rural areas, due to greater needs for public services. However, the checkerboard pattern of land ownership which characterizes much of southwestern New Mexico results in a confusion of jurisdictions, even in less populous portions of the SEPA. The federal government is regionally significant due to large land-holdings managed by the Bureau of Land Management (BLM), the Forest Service, and branches of the Department of Defense (DOD). The state of New Mexico similarly has title to vast acreages, while the Mescalero Apache Indian Tribe occupies a reservation including approximately one-fifth of Otero County.

Responsibilities for the maintenance of facilities and the provision of services fall primarily to counties, municipalities, and special districts. Transportation networks are an exception: federal and state agencies regulate or maintain most aspects of transport in the SEPA. Communications are likewise a federal concern. Police and fire protection, as well as utilities, are undertaken by counties, municipalities and the Mescalero Apache Indian Tribe. Public schools are

TABLE 5.1

BALANCE OF LOCAL GOVERNMENT REVENUES AND EXPENDITURES,
SOUTHWESTERN NEW MEXICO SEPA, 1976-1977

<u>Local Government</u>	<u>Revenues</u>	<u>Expenditures</u>	<u>Balance</u>
Dona Ana County	3,223,837	3,115,700	108,137
Hatch	316,536	331,659	(15,123)
Las Cruces	17,738,857	16,712,264	1,026,593
Mesilla	513,940	484,517	29,423
Grant County	1,905,345	2,158,305	(252,960)
Bayard	394,447	356,190	38,257
Central	265,998	252,472	13,526
Hurley	210,901	243,223	(32,322)
Silver City	2,279,600	2,291,654	(12,054)
Hidalgo County	718,457	657,726	60,731
Lordsburg	2,296,642	2,571,476	(274,834)
Virden	2,341	3,102	(761)
Luna County	1,271,114	1,201,204	69,910
Columbus	57,564	48,688	8,876
Deming	2,917,668	3,210,065	(292,397)
Otero County	1,508,532	1,353,983	154,549
Alamogordo	4,392,239	2,098,532	2,293,707
Cloudcroft	257,223	266,357	(9,134)
Tularosa	449,595	451,099	(1,504)
Sierra County	537,086	533,324	3,762
Truth or Consequences	1,690,707	1,673,932	16,775
Williamsburg	90,016	108,898	(18,882)
SEPA	43,038,645	40,124,370	2,914,275
New Mexico	317,866,821	333,566,496	(15,699,675)

Source: New Mexico Department of Finance and Administration, Local Government Division, New Mexico County Governments and New Mexico Municipal Governments, 1977.

operated by special districts; Indian children may also attend special schools run by the Bureau of Indian Affairs, and there are a few private and religious institutions which are independent of all governments. Responsibility for health care is shared in a similar fashion. Counties and municipalities support hospitals and clinics, the Public Health Service operates others, and private and religious groups maintain still others.

A majority of local governments in the SEPA had budgetary surpluses in the fiscal year 1976-1977. Those governments which operated in the red included several small municipalities in rural areas such as Hatch in Dona Ana County, Hurley in Grant County, Virden in Hidalgo County, Cloudcroft and Tularosa in Otero County, and Williamsburg in Sierra County. Table 5.1 indicates the balance of local government revenues and expenditures for all counties and municipalities in the SEPA in 1976-1977. As shown, three large communities experienced deficits: Deming, Lordsburg and Silver City. However, the two largest cities in the SEPA--Alamogordo and Las Cruces--had substantial surpluses; as a result the total for local governments in the region was more than \$2.9 million in the black, in sharp contrast to local governments in the state as a whole, which were nearly \$15.7 million in the red.

Table 5.2 outlines 1976 assessed valuations, tax rates and property tax rates for incorporated and unincorporated areas in the SEPA. The SEPA had an average combined property tax rate of \$32.62 per thousand dollars of assessed valuation, 6.3 percent less than the state average. The highest property tax rate existed in Las Cruces, and the lowest in unincorporated portions of Sierra County. The latter was approximately one-half of the former. As outlined in Table 5.3, property taxes represented one-third of all county government revenues in 1976-1977. However, they were less important to municipal governments, for whom property taxes averaged only 1.2 percent of all income. Table 5.5 shows that gross receipts (or sales) taxes were the primary source of revenue for cities, towns and villages in the SEPA, providing \$5.8 million in 1976-1977, or 17.2 percent of all income.

Exhibits 5.1 and 5.3 depict graphically total revenues by source for county and municipal governments in the SEPA. It may be seen that receipts from local utilities are an important source of revenue (amounting to over one-third of total income) for municipalities in the SEPA. However, these revenues are committed to provision of utilities, and transfers of funds to other accounts are rare. Moreover, gross receipts taxes accruing to local municipalities generally increased by a factor of 10 percent between 1976-1977. Notable exceptions were Cloudcroft and Hurley, registering drops of nearly one-third from the previous year. Variable incomes into SEPA municipal governments may, however, dictate the ability of a town to finance unexpected change. Mesilla, for example, exceeded its 1977 budget by

TABLE 5.2

ASSESSED VALUATION, TAX RATES, AND PROPERTY TAX RECEIPTS,SOUTHWESTERN NEW MEXICO SEPA, 1976-1977

<u>County/Community</u> ^a	<u>Assessed Valuation</u> (in thousands of dollars)	<u>Combined</u> ^b <u>Tax Rate</u> (dollars per thousands of as- sessed valuation)	<u>Combined Property</u> <u>Tax Receipts</u> ^c (in thousands of dollars)
Dona Ana County	173,604	38.61	6,702
Hatch	1,325	36.47	48
Las Cruces	82,083	50.94	4,181
Mesilla	2,974	31.55	94
Unincorporated Areas	87,222	27.28	2,379
Grant County	125,965	26.44	3,331
Bayard	2,766	26.35	73
Central	949	54.45	52
Hurley	1,618	26.35	43
Silver City	16,190	33.21	538
Unincorporated Areas	104,442	25.13	2,625
Hidalgo County	52,034	35.11	1,827
Lordsburg	9,185	28.46	261
Virden	77	27.89	2
Unincorporated Areas	42,772	36.56	1,564
Luna County	52,194	26.25	1,370
Columbus	529	27.82	15
Deming	14,435	27.82	402
Unincorporated Areas	37,230	25.60	953
Otero County	69,394	33.78	2,344
Alamogordo	37,342	37.28	1,392
Cloudcroft	2,228	34.18	76
Tularosa	2,131	40.16	86
Unincorporated Areas	27,693	28.51	790
Sierra County	21,375	26.15	559
Truth or Consequences	8,137	27.38	223
Williamsburg	627	31.74	20
Unincorporated Areas	12,611	25.07	316
SEPA	494,566	32.62	16,133
New Mexico	3,911,147	34.83	136,217

Notes: ^aCounty figures are totals for incorporated and unincorporated areas.

^bTax rate is combined total of state, county, municipal and special district levies; county and unincorporated area figures are averages.

^cTax receipts may not equal rate times valuation due to rounding.

Source: New Mexico Department of Finance and Administration, Local Government Division, New Mexico County Governments, 1977.

TABLE 5.3

REVENUES BY SOURCE, COUNTY GOVERNMENTS, SOUTHWESTERN NEW MEXICO SEPA, 1976

Fund/Revenue Source	Dona Ana County		Grant County		Hidalgo County	
	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total
General Fund	1,603,210	49.7	910,776	47.8	402,063	56.0
Property Taxes ^a	1,072,041	33.3	776,844	40.9	311,737	43.4
Other Taxes	211,758	6.6	41,664	2.2	31,649	4.4
Fees & Rentals	181,966	5.6	24,730	1.3	20,121	2.8
Grants	25,004	0.8	1,950	0.1	500	0.1
Other Sources	112,441	3.5	65,588	3.4	38,056	5.3
Revenue Sharing Fund	707,782	21.9	583,104	30.6	160,032	22.2
Farm & Range Fund	12,009	0.4	17,864	0.9	9	0.1
Fire Fund	111,529	3.5	18,000	0.9	12,017	1.7
Recreation Fund ^b	15,460	0.5	2,064	0.1	2,272	0.3
Road Fund	392,665	12.2	196,522	10.3	83,200	11.5
Other Special Funds	381,182	11.8	177,015	9.3	58,864	8.2
Total	3,223,837	100.0	1,905,345	100.0	718,457	100.0
Fund/Revenue Source	Luna County		Otero County		Sierra County	
	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total
General Fund	458,562	36.1	652,812	43.3	266,201	49.6
Property Taxes ^a	326,245	25.7	414,920	27.5	125,644	23.5
Other Taxes	24,897	2.0	69,984	4.6	19,152	3.6
Fees & Rentals	35,139	2.8	48,697	3.2	26,904	5.0
Grants	800	0.1	4,179	0.3	41,028	7.6
Other Sources	71,481	5.6	115,032	7.6	53,473	9.9
Revenue Sharing Fund	299,514	23.6	280,407	18.6	85,770	15.9
Farm & Range Fund	13,444	1.0	15,833	1.0	12,844	2.4
Fire Fund	0	0.0	71,920	4.8	24,001	4.5
Recreation Fund ^b	15	0.1	10,114	0.7	849	0.2
Road Fund	389,690	30.6	315,524	20.9	132,772	24.7
Other Special Funds	109,889	8.6	161,922	10.7	14,649	2.7
Total	1,271,114	100.0	1,508,532	100.0	537,086	100.0
Fund/Revenue Source	SEPA		New Mexico			
	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total		
General Fund	4,293,624	46.9	30,092,041	46.5		
Property Taxes ^a	3,027,431	33.0	17,761,425	27.5		
Other Taxes	399,104	4.4	5,418,943	8.4		
Fees & Rentals	337,557	3.7	1,922,897	3.0		
Grants	73,461	0.8	575,414	0.9		
Other Sources	456,071	5.0	4,413,362	6.7		
Revenue Sharing Fund	2,116,609	23.1	13,356,785	20.6		
Farm & Range Fund	72,003	0.8	331,992	0.5		
Fire Fund	237,467	2.6	1,120,149	1.7		
Recreation Fund ^b	30,774	0.3	212,657	0.4		
Road Fund	1,510,373	16.5	8,740,185	13.5		
Other Special Funds	903,521	9.8	10,842,780	16.8		
Total	9,164,371	100.0	64,696,589	100.0		

Notes: ^aOnly county property taxes shown; revenue-sharing from state property taxes not considered.

^bIncludes portion of receipts from cigarette tax.

Source: New Mexico Department of Finance and Administration, Local Government Division, New Mexico County Governments, 1977.

EXHIBIT 5.1

REVENUES BY SOURCE, COUNTY GOVERNMENTS IN SEPA, 1976

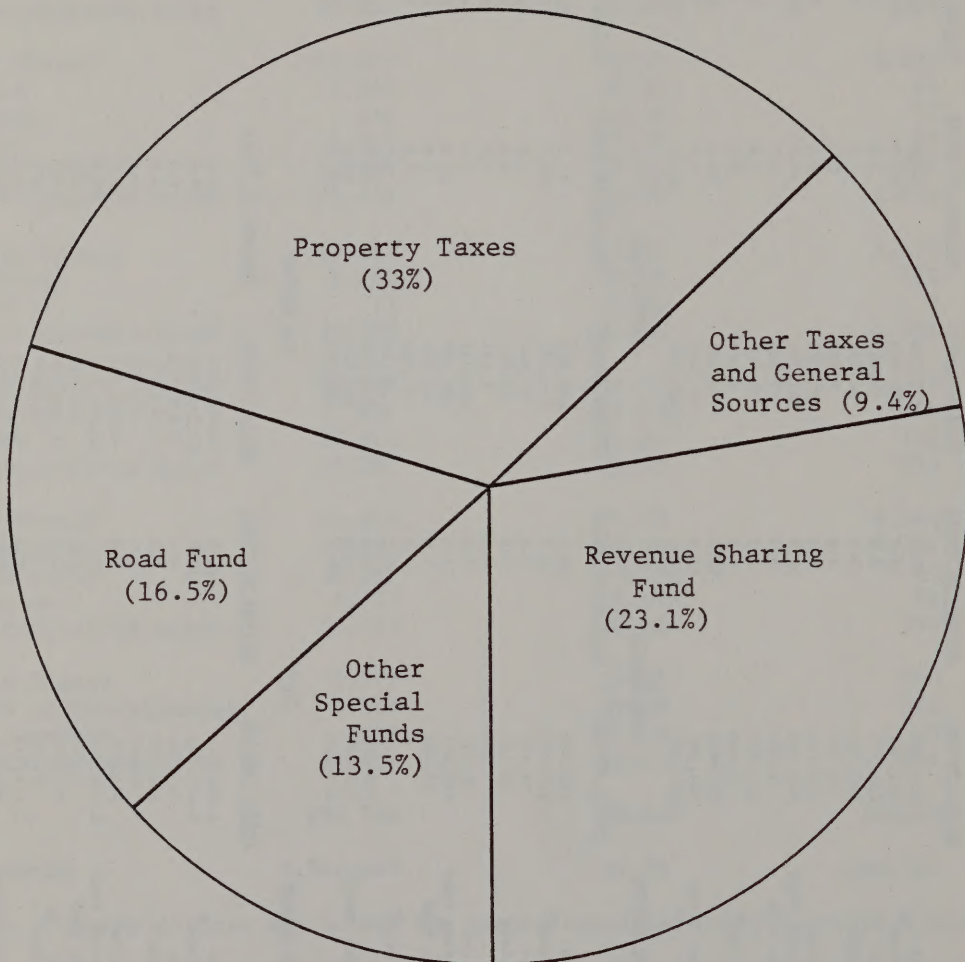


EXHIBIT 5.2

EXPENDITURES BY TYPE, COUNTY GOVERNMENTS IN SEPA, 1976

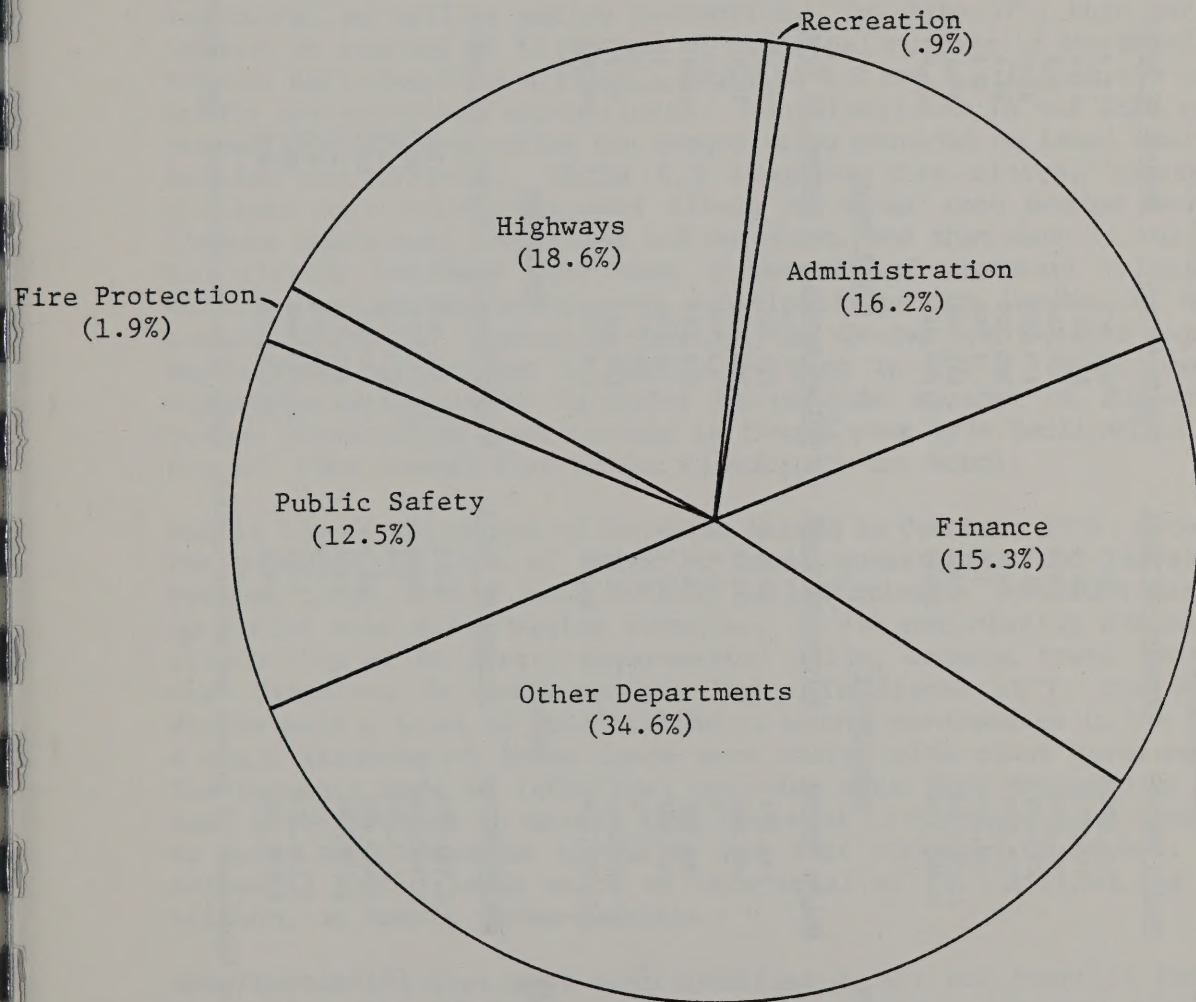


TABLE 5.4

EXPENDITURES BY TYPE, COUNTY GOVERNMENTS, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Type of Expenditure</u>	<u>Dona Ana County</u>		<u>Grant County</u>		<u>Hidalgo County</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
Administration	623,673	20.1	251,939	11.7	92,241	14.0
Finance	519,074	16.4	249,865	11.6	102,639	15.6
Fire Protection	91,258	2.9	18,056	0.8	4,069	0.6
Highways	373,002	11.8	454,299	21.0	79,361	12.1
Public Safety	455,978	14.4	283,595	13.1	105,928	16.1
Recreation	40,182	1.3	7,950	0.4	2,611	0.4
Other Departments	1,043,533	33.1	892,601	41.1	270,877	41.2
Total	3,155,700	100.0	2,158,305	100.0	657,726	100.0

<u>Type of Expenditure</u>	<u>Luna County</u>		<u>Otero County</u>		<u>Sierra County</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
Administration	174,324	14.5	242,389	17.8	77,641	14.6
Finance	165,195	13.8	257,552	19.0	97,603	18.3
Fire Protection	0	0.0	43,703	3.2	16,678	3.1
Highways	389,846	32.5	270,583	19.8	122,782	23.0
Public Safety	96,957	8.1	72,956	5.3	116,051	21.8
Recreation	0	0.0	20,917	1.5	766	0.1
Other Departments	374,882	31.1	455,883	33.4	101,803	19.1
Total	1,201,204	100.0	1,363,983	100.0	533,324	100.0

<u>Type of Expenditure</u>	<u>SEPA</u>		<u>New Mexico</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
Administration	1,471,207	16.2	10,366,868	17.7
Finance	1,391,928	15.3	10,778,201	18.4
Fire Protection	173,764	1.9	964,630	1.6
Highways	1,689,873	18.6	10,141,564	17.3
Public Safety	1,131,465	12.5	4,497,211	7.7
Recreation	72,426	0.9	333,234	0.6
Other Departments	3,139,579	34.6	21,642,908	36.7
Total	9,070,242	100.0	58,724,616	100.0

Source: New Mexico Department of Finance and Administration, Local Government Division, New Mexico County Governments, 1977.

60 percent with contributions to utilities and general fund expenses. The majority of municipalities in the SEPA similarly overspent budgeted funds, although to lesser degrees. All municipalities took in revenues substantially beyond budget, easily absorbing these expenditures. Williamsburg was alone among area municipal governments in overspending revenues during fiscal 1977.

Tables 5.4 and 5.6 describe spending patterns of county and municipal governments in the 1976-1977 fiscal year. As shown, the largest single share of county expenditures went to construction and maintenance of highways, nearly \$1.7 million, or 18.6 percent of total county budgets in the SEPA. By contrast, municipalities spent the greatest portion of their funds on administrative and financial functions, as well as police protection. In 1976-1977, this portion equaled an average of 32 percent of municipal budgets in the SEPA, and totaled more than \$9.9 million. Exhibits 5.2 and 5.4 illustrate these county and municipal expenditures. Municipalities in the SEPA spend proportionately over twice the amount as do counties on local administration and finance. Table 5.7 suggests that cities, towns and villages were relatively more likely to enter into bonded debt to finance additional facilities and services, and that many in the SEPA had already borrowed more than 4 percent of assessed valuation. Assessed valuations among area municipalities are increasing by an annual average of 5 percent; Deming, Las Cruces and Mesilla experienced jumps of between 10 and 14 percent in 1977. Thus, bonding capacities are growing in order to provide sources of financing. Bonded indebtedness that existed in fiscal year 1976 declined in 1977 for all SEPA communities except Cloudcroft and Hatch.

Public Law 94-65, an Act of Congress passed in October, 1976, provides for payments in lieu of taxes to local governments for tax-exempt federal lands within local taxing jurisdictions. Although the act specified some distribution formulae, it did not clearly define the eligibility of different governmental units, causing towns and special districts to challenge the law. In fiscal 1977, the United States paid a total of \$3.3 million to county governments in the SEPA; a small fraction of these funds were shared with other governments. The payments made to individual counties were \$884 thousand to Dona Ana; \$586 thousand to Grant; \$259 thousand to Hidalgo; \$421 thousand to Luna; \$894 thousand to Otero; and \$304 thousand to Sierra. The estimated public lands share of this total of \$3.3 million was \$2.4 million, or nearly three-quarters.

Notwithstanding that most municipalities do not now share in federal payments in lieu of taxes, municipal governments in the SEPA appear to possess a more flexible tax base than do county governments, insofar as they rely on the gross receipts tax rather than the property tax. However, all local governments have adequate fiscal resources. In most counties and municipalities federal and state aid represents

TABLE 5.5

REVENUES BY SOURCE, MUNICIPAL GOVERNMENTS, SOUTHWESTERN NEW MEXICO, SEPA, 1976

Fund/Revenue Source	Alamogordo		Bayard		Central	
	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total
General Fund	1,902,028	43.3	170,749	43.3	46,963	17.7
Franchise Tax	136,108	3.1	14,055	3.6	6,683	2.5
Gasoline Tax	169,405	3.9	20,586	5.2	4,996	1.9
Gross Receipts Tax	1,090,183	24.8	86,253	21.9	20,218	7.6
Property Tax	83,596	1.9	5,978	1.5	2,059	0.8
Fines Fees and Forfeits	190,247	4.3	25,233	6.4	5,156	1.9
Other Sources	234,489	5.3	18,644	4.7	7,851	3.0
Revenue-Sharing Fund	115,098	2.6	19,870	5.0	38,219	14.4
Utilities Receipts	1,267,835	28.9	134,707	34.2	75,256	28.3
Debt Service	226,935	5.2	83	0.0	27,487	10.3
Other Funds	880,343	20.0	69,038	17.5	78,073	29.3
Total	4,392,239	100.0	394,447	100.0	265,998	100.0
Fund/Revenue Source	Cloudcroft		Columbus		Deming	
	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total
General Fund	75,919	29.5	14,526	25.2	1,013,199	34.7
Franchise Tax	988	0.4	0	0.0	63,384	2.2
Gasoline Tax	5,982	2.3	2,630	4.6	28,254	1.0
Gross Receipts Tax	30,101	11.7	4,815	8.4	458,911	15.7
Property Tax	4,787	1.9	1,273	2.2	33,762	4.3
Fines Fees and Forfeits	10,082	3.9	713	1.2	126,384	4.3
Other Sources	23,979	9.3	5,095	8.8	302,504	10.3
Revenue-Sharing Fund	25,315	9.8	2,306	4.0	89,342	3.1
Utilities Receipts	92,043	35.8	17,859	31.1	1,132,359	38.8
Debt Service	12,246	4.8	5,239	9.1	3,304	0.4
Other Funds	51,700	20.1	15,634	27.2	679,464	23.0
Total	257,223	100.0	57,564	100.0	2,917,668	100.0
Fund/Revenue Source	Hatch		Hurley		Las Cruces	
	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total
General Fund	106,249	33.6	96,385	45.7	5,618,801	31.7
Franchise Tax	3,645	1.2	7,450	3.5	232,500	1.3
Gasoline Tax	19,545	6.2	7,453	3.5	476,800	2.7
Gross Receipts Tax	55,792	17.6	52,071	24.7	2,781,400	15.7
Property Tax	3,645	1.2	3,208	1.6	188,520	1.1
Fines Fees and Forfeits	10,796	3.4	16,059	7.6	1,080,800	6.1
Other Sources	12,826	4.0	10,144	4.8	858,781	4.8
Revenue-Sharing Fund	6,373	2.0	8,816	4.2	1,288,409	7.3
Utilities Receipts	158,362	50.0	65,253	30.9	5,684,749	32.0
Debt Service	10,554	3.3	0	0.0	1,462,156	8.2
Other Funds	34,998	11.1	40,447	19.2	3,684,742	20.8
Total	316,536	100.0	210,901	100.0	17,738,857	100.0

Source: New Mexico Department of Finance and Administration, Local Government Division, New Mexico Municipal Governments, 1977.

TABLE 5.5 (Cont'd)

REVENUES BY SOURCE, MUNICIPAL GOVERNMENTS, SOUTHWESTERN NEW MEXICO, SEPA, 1976

<u>Fund/Revenue Source</u>	<u>Lordsburg</u>		<u>Mesilla</u>		<u>Silver City</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
General Fund	391,293	17.0	142,386	27.7	1,173,900	51.5
Franchise Tax	18,773	0.8	5,205	1.0	60,838	2.7
Gasoline Tax	103,752	4.5	6,959	1.4	82,398	3.6
Gross Receipts Tax	161,318	7.0	32,214	6.3	758,674	33.3
Property Tax	20,502	0.9	7,578	1.5	35,015	1.5
Fines, Fees & Forfeits	24,482	1.1	39,300	7.6	49,673	2.2
Other Sources	62,466	2.7	51,130	9.9	187,302	8.2
Revenue-Sharing Fund	39,981	1.8	19,731	3.8	100,268	4.4
Utilities Receipts	1,715,459	74.7	69,927	13.7	614,472	27.0
Debt Service	0	0.0	0	0.0	87,617	3.8
Other Funds	149,909	6.5	281,896	54.8	303,343	13.3
Total	2,296,642	100.0	513,940	100.0	2,279,600	100.0
<u>Fund/Revenue Source</u>	<u>Truth or Consequences</u>		<u>Tularosa</u>		<u>Virden</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
General Fund	446,380	26.4	141,076	31.4	1,519	64.9
Franchise Tax	6,833	0.4	12,127	2.7	0	0.0
Gasoline Tax	46,287	2.7	22,259	5.0	508	21.7
Gross Receipts Tax	211,220	12.5	58,840	13.1	437	18.7
Property Tax	17,955	1.1	4,734	1.1	230	9.8
Fines Fees and Forfeits	92,954	5.5	25,084	5.6	15	0.6
Other Sources	71,131	4.2	18,032	3.9	329	14.1
Revenue-Sharing Fund	43,902	2.6	41,559	9.2	822	35.1
Utilities Receipts	1,071,721	63.4	152,187	34.0	0	0.0
Debt Service	1,666	0.1	18,987	4.2	0	0.0
Other Funds	127,038	7.5	95,786	21.2	0	0.0
Total	1,690,707	100.0	449,595	100.0	2,341	100.0
<u>Fund/Revenue Source</u>	<u>Williamsburg</u>		<u>SEPA</u>		<u>New Mexico</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
General Fund	74,981	83.3	11,416,354	33.7	103,066,322	40.7
Franchise Tax	1,466	1.6	570,055	1.7	5,434,047	2.1
Gasoline Tax	11,777	13.1	1,009,591	3.0	7,151,706	2.8
Gross Receipts Tax	8,669	9.6	5,811,116	17.2	56,028,036	22.1
Property Tax	1,266	1.4	414,108	1.2	4,075,102	1.7
Fines Fees & Forfeits	4,842	5.4	1,701,820	5.0	10,272,109	4.1
Other Sources	46,961	52.2	1,909,664	5.6	20,105,322	7.9
Revenue-Sharing Fund	3,448	3.8	1,843,459	5.4	12,713,073	5.0
Utilities Receipts	0	0.0	12,252,189	36.2	65,801,510	26.0
Debt Service	2,709	3.0	1,858,893	5.5	21,213,326	8.4
Other Funds	8,878	9.9	6,501,298	19.2	50,376,001	19.9
Total	90,016	100.0	33,872,193	100.0	253,170,232	100.0

Source: New Mexico Department of Finance and Administration, Local Government Division, New Mexico Municipal Governments, 1977.

TABLE 5.6

EXPENDITURES, BY TYPE, MUNICIPAL GOVERNMENTS, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Type of Expenditure</u>	<u>Alamogordo</u>		<u>Bayard</u>		<u>Central</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
Administration, Finance and Police	741,175	35.3	185,364	52.0	44,288	17.5
Fire Protection	11,904	0.6	13,442	3.8	14,206	5.6
Recreation	0	0.0	60	0.0	1,777	0.7
Utilities	386,183	18.4	86,148	24.2	65,520	26.0
Debt Service	582,675	27.8	58,065	16.3	39,420	15.6
Other	376,595	17.9	13,109	3.7	87,261	34.6
Total	2,098,532	100.0	356,190	100.0	252,472	100.0
<u>Type of Expenditure</u>	<u>Cloudcroft</u>		<u>Columbus</u>		<u>Deming</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
Administration, Finance and Police	81,417	30.6	10,544	21.7	1,033,750	32.2
Fire Protection	12,415	4.7	11,154	22.9	14,508	0.5
Recreation	7,409	2.8	483	1.0	23,432	0.7
Utilities	89,054	33.4	13,697	28.1	1,121,611	34.9
Debt Service	29,576	11.1	4,643	9.5	156,962	4.9
Other	46,486	17.5	8,167	16.8	859,802	26.8
Total	266,357	100.0	48,688	100.0	3,210,065	100.0
<u>Type of Expenditure</u>	<u>Hatch</u>		<u>Hurley</u>		<u>Las Cruces</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
Administration, Finance and Police	134,462	40.5	115,166	47.3	4,895,248	29.3
Fire Protection	7,404	2.2	8,749	3.6	26,393	0.2
Recreation	1,471	0.4	14,436	5.9	0	0.0
Utilities	112,303	33.9	65,034	26.8	4,487,834	26.9
Debt Service	48,865	14.8	0	0.0	2,749,626	16.5
Other	27,154	8.2	39,838	16.4	4,553,163	27.1
Total	331,659	100.0	243,223	100.0	16,712,264	100.0

Source: New Mexico Department of Finance and Administration, Local Government Division, New Mexico Municipal Governments, 1977.

TABLE 5.6 (Cont'd)

EXPENDITURES, BY TYPE, MUNICIPAL GOVERNMENTS, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Type of Expenditure</u>	<u>Lordsburg</u>		<u>Mesilla</u>		<u>Silver City</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
Administration, Finance and Police	514,541	20.0	136,156	28.1	1,172,335	51.2
Fire Protection	8,110	0.3	7,314	1.5	13,484	0.6
Recreation	15,391	0.6	1,771	0.4	4	0.0
Utilities	1,593,441	62.0	37,092	7.7	447,548	19.5
Debt Service	153,675	6.0	17,950	3.6	248,800	10.9
Other	286,318	11.1	284,234	58.7	409,483	17.8
Total	2,571,476	100.0	484,517	100.0	2,291,654	100.0

<u>Type of Expenditure</u>	<u>Williamsburg</u>		<u>SEPA</u>		<u>New Mexico</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
Administration, Finance and Police	93,393	85.8	9,934,613	32.0	102,581,146	41.4
Fire Protection	8,488	7.8	178,377	0.6	1,377,942	0.6
Recreation	0	0.0	80,107	0.3	924,462	0.3
Utilities	0	0.0	9,217,421	29.6	51,766,098	20.9
Debt Service	2,650	2.4	4,369,986	14.0	31,955,115	12.9
Other	4,367	4.0	7,323,622	23.5	59,237,117	23.9
Total	108,898	100.0	31,104,126	100.0	247,841,880	100.0

<u>Type of Expenditure</u>	<u>Truth or Consequences</u>		<u>Tularosa</u>		<u>Virden</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
Administration, Finance and Police	627,142	37.6	147,440	32.7	2,192	70.7
Fire Protection	10,856	0.6	9,950	2.2	0	0.0
Recreation	11,706	0.7	2,167	0.5	0	0.0
Utilities	554,772	33.1	157,184	34.8	0	0.0
Debt Service	226,051	13.5	51,028	11.3	0	0.0
Other	243,405	14.5	83,330	18.5	910	29.3
Total	1,673,932	100.0	451,099	100.0	3,102	100.0

Source: New Mexico Department of Finance and Administration, Local Government Division, New Mexico Municipal Governments, 1977.

EXHIBIT 5.3

REVENUES BY SOURCE, MUNICIPAL GOVERNMENTS IN SEPA, 1976

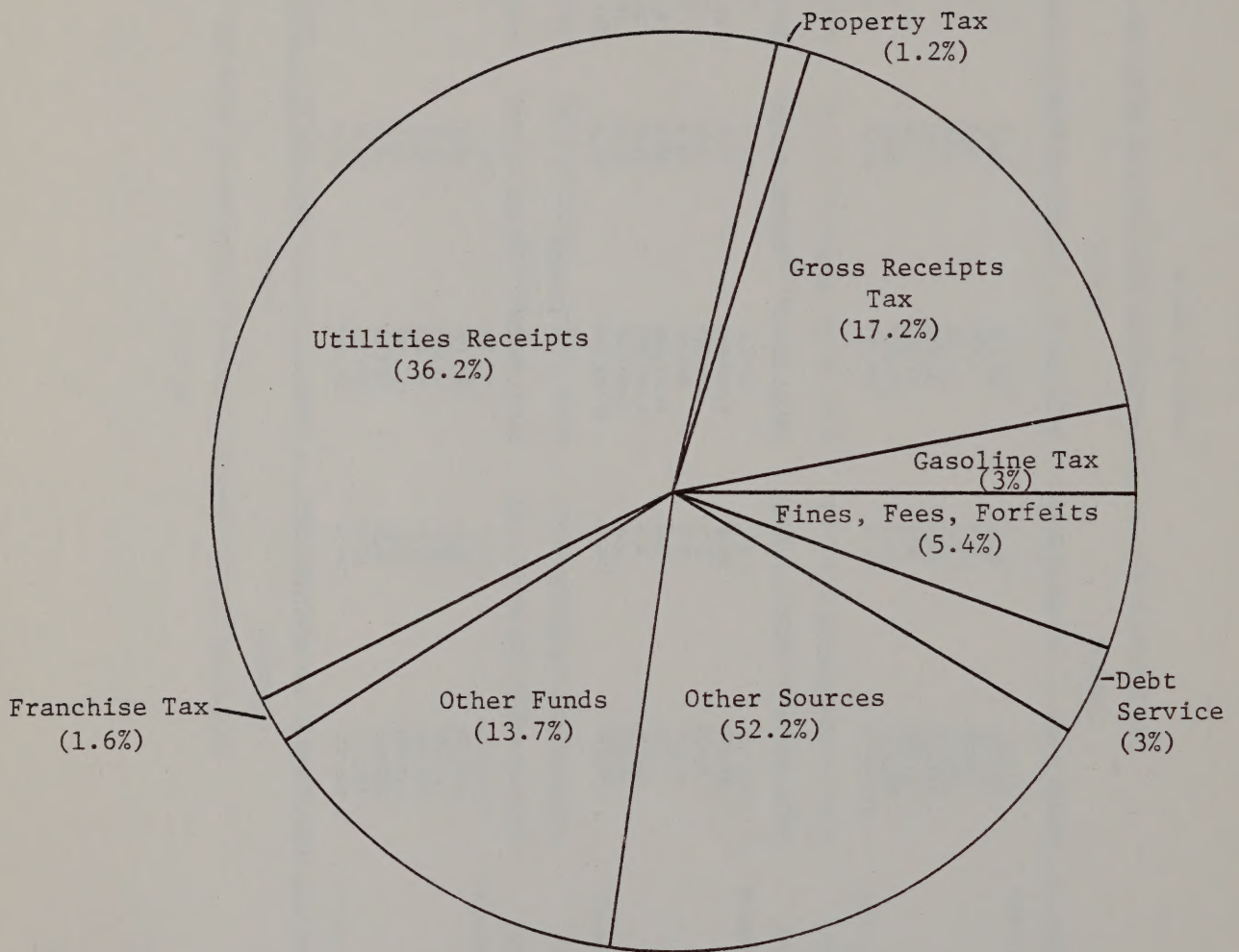


EXHIBIT 5.4

EXPENDITURES BY TYPE, MUNICIPAL GOVERNMENTS IN SEPA, 1976

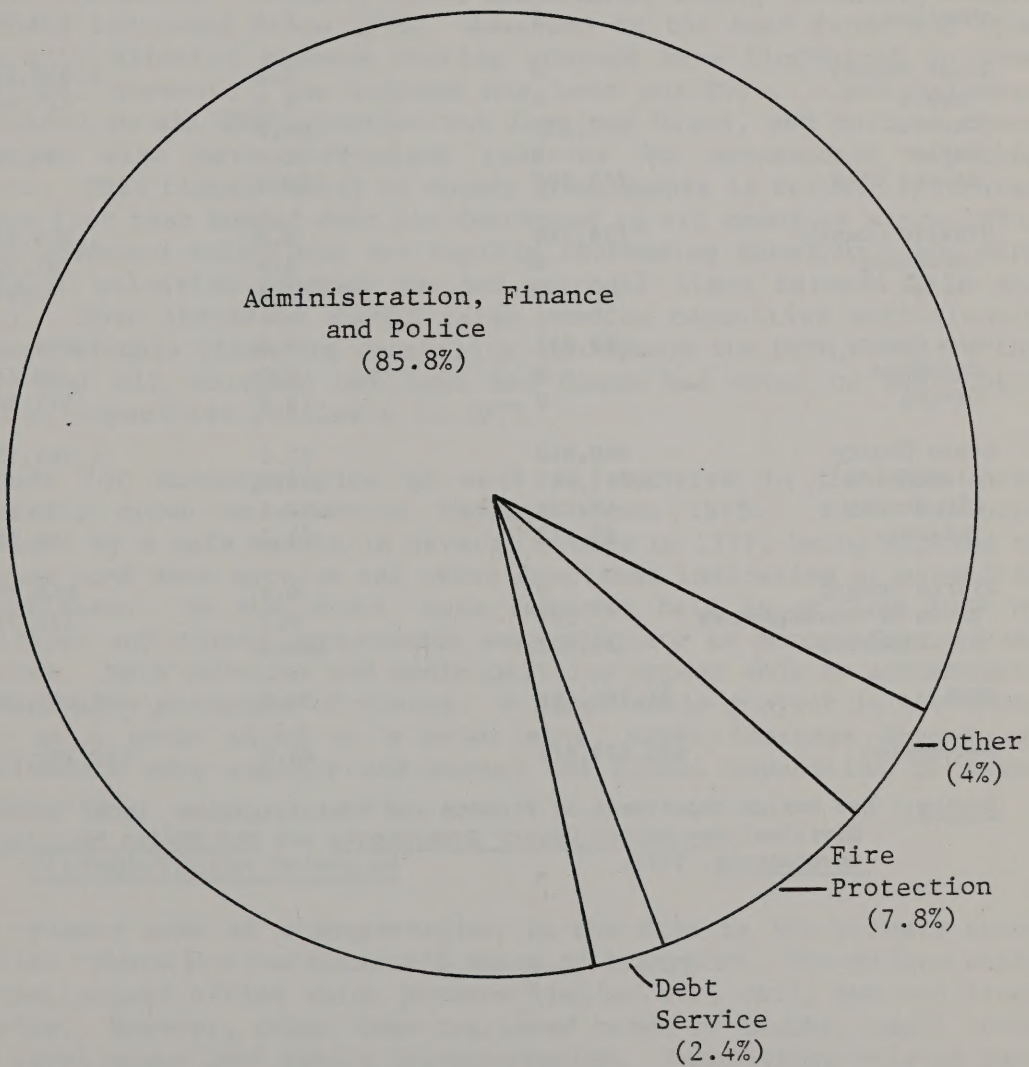


TABLE 5.7

BONDED INDEBTEDNESS OF LOCAL GOVERNMENTS, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Local Government</u>	<u>Net Bonded Debt</u>	<u>Percent of Bonding Capacity</u>	<u>Additional Debt Potential</u>
Dona Ana County	0	0.0	6,944,165
Hatch	59,810	100.0	0
Las Cruces	6,785,859	100.0	0
Mesilla	0	0.0	118,968
Grant County	0	0.0	5,038,619
Bayard	0	0.0	110,646
Central	247,323	100.0	0
Hurley	0	0.0	64,703
Silver City	833,390	100.0	0
Hidalgo County	124,149	6.0	1,957,221
Lordsburg	0	0.0	367,382
Virden	0	0.0	3,092
Luna County	188,531	9.0	1,899,212
Columbus	0	0.0	21,145
Deming	0	0.0	577,382
Otero County	486,512	17.5	2,289,254
Alamogordo	2,883,045	100.0	0
Cloudcroft	18,821	21.1	70,287
Tularosa	45,813	53.7	39,435
Sierra County	0	0.0	854,994
Truth or Consequences	100	0.1	325,372
Williamsburg	31,831	100.0	0
SEPA	11,705,184	36.1	20,681,877
New Mexico	222,823,979	64.9	120,388,030

Source: New Mexico Department of Finance and Administration, Local Government Division, New Mexico County Governments and New Mexico Municipal Governments, 1977.

less than one-quarter of all revenues. County and local governments are, therefore, largely dependent on their own sources of revenue, which are growing. While budgets rise with increasing populations, income increases faster than expenditures.

Budgeted expenditures for the six counties making up the SEPA generally grew substantially between 1976-1977 and 1977-1978. Dona Ana, Luna, and Otero Counties had expenses which were approximately 40 percent higher than the previous year. Although Hidalgo and Sierra Counties also had increased budgetary expectations, Grant County reduced projected expenditures for miscellaneous funds. Actual expenses in 1976-1977 for most counties in the SEPA were within budget, while all counties registered revenues accrued at 20 percent beyond budget standards. Property taxes taken in by county governments have steadily increased since 1975. Revenues to the Road Funds and from federally allotted revenue sharing sources have fluctuated in some counties, however. The balance has been positive. Cash balances increased in all SEPA counties but Luna and Grant, and both of these counties also have sufficient reserves to accommodate expected growth. This fiscal health of county governments is further indicated by the fact that bonded debt has decreased in all counties since 1970, while assessed valuations are rapidly increasing throughout the SEPA (Hidalgo valuation climbed two and one-half times between 1975 and 1977). Such increases should raise bonding capacities sufficiently to permit ample financing capability throughout the SEPA, despite the fact that all counties but Luna and Grant had total or near-total bonding capacities available in 1977.

Budgets for municipalities as well as counties in the SEPA have generally grown by constant factors since 1975. Cash balances declined by a safe margin in several cities in 1977, being applied to revenue bond debt service and other functions indicative of expanding communities. On the whole, cash reserves held as of June 1977 by municipal and county governments were adequate to accommodate fiscal demands. Both counties and municipalities appear able to accommodate present slow processes of change. A large-scale project in the SEPA, such as a power plant or a major mine, might increase demands on governments more rapidly and exceed the fiscal capacities of these authorities.

5.2 Transportation Networks

The primary mode of transportation in the SEPA is the private automobile. There are few alternate means of transport. Exceptions exist in the largest cities which possess limited air, rail, bus and truck service. However, other than chartered buses or trucks, small towns and rural areas lack public transportation. Inhabitants rely on cars and pickup trucks, which utilize numerous unimproved roads and dirt tracks as well as paved highways maintained by state, county and

TABLE 5.8

AIRPORT FACILITIES, ELEVATION AND USE CLASSIFICATIONS, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Airport</u>	<u>Community Served</u>	<u>Elevation</u>	<u>Length of Principal Runway</u>	<u>Surface of Principal Runway</u>	<u>Lighting</u>	<u>Communications</u>	<u>Use Classification</u>
Dona Ana County							
Hatch Municipal	Hatch	4146	2976	paved	none	none	Public use
Las Cruces-Crawford	Las Cruces- Mesilla	4454	7500	paved	yes, with beacon	FAA	Public Use
Sunland Airpark	Anapra	3736	13,373	paved	yes, with beacon	Unicom	Public use
Grant County							
Silver City-Grant County	Bayard, Central, Hurley, Silver City	5443	6410	paved	yes, with beacon	Unicom	Public use
Hidalgo County							
Lordsburg Municipal	Lordsburg	4286	5000	paved	yes	Unicom	Public Use
Turner Aire	Lordsburg	--	4000	surfaced	yes	--	Public Use
Luna County							
Columbus Stockyards	Columbus	4017	2800	dirt	none	none	Private/Restricted
Deming Municipal	Deming	4309	6578	paved	yes, on demand	FAA	Public Use
Otero County							
Alamogordo-White Sands Regional	Alamogordo, Tularosa	4197	7005	paved	yes, with beacon	Unicom	Public Use
Runyan	Pinon	5327	4000	dirt	none	none	Public Use
Templeton Ranch	Guadalupe Mountains	4024	3200	dirt	none	none	Public Use
Sierra County							
Truth or Consequences Municipal	Truth or Consequences	4860	5600	paved	yes, with beacon	FAA	Public Use

Sources: New Mexico Aviation Board, New Mexico Aeronautical Chart, 1978.

municipal agencies. The principal problems of transportation in southwestern New Mexico are therefore related to automobile and truck traffic. Highways carry loads beyond design capacities, and deterioration of roadbeds, surfaces, shoulders and associated structures is recurrent, as noted below.

Regularly scheduled flights of Airways of New Mexico, Frontier Airlines, and Zia Airlines link Alamogordo, Las Cruces and Silver City with Albuquerque, El Paso, Ruidoso and Santa Fe. However, flights are relatively infrequent, not exceeding eight departures on weekdays, and seven departures on Saturday and Sunday, at Alamogordo-White Sands Regional Airport; and three departures on weekdays, and one a day on weekends, at Las Cruces and Silver City. Chartered and private aircraft operate from all three locations, as they do from seven other public airfields in the SEPA. In addition, light planes and helicopters utilize numerous dirt and grass landing strips throughout southwestern New Mexico on an irregular basis. The most important of these airfields is at the Columbus stockyards in Luna County. It is included with the listing of public facilities in Table 5.8.

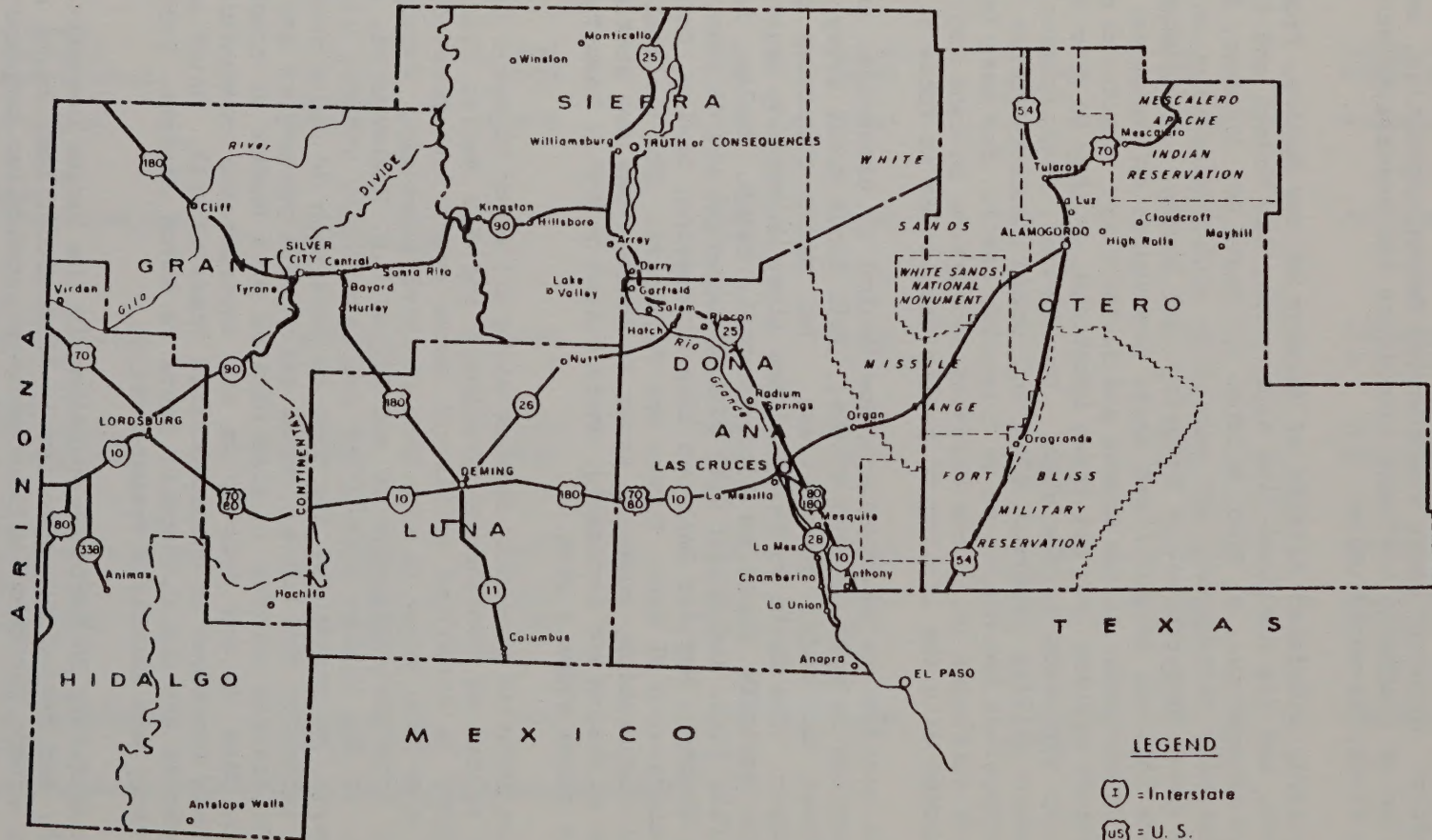
Rail service in southwestern New Mexico is extensive, an uncommon situation in most western states. Rail lines cross every county and connect all major communities. Two major companies carry rail freight. The Santa Fe Railroad has lines connecting Bayard, Deming, Engle (outside Truth or Consequences), Hatch, Hurley, Las Cruces, Mesilla Park, and Silver City with Albuquerque and El Paso. Lines of the Southern Pacific Railroad link Alamogordo, Deming, Lordsburg and Tularosa with El Paso, Tucson and Tucumcari. The National Passenger Rail Corporation, commonly known as Amtrak, has two stations in the SEPA at Deming and Lordsburg, where trains on the El Paso-Tucson route make three stops a week.

Buses maintain intercity service along all major highways in the SEPA. The routes of Continental Trailways and New Mexico Transportation Company (a Greyhound affiliate) serve every incorporated community and make flag stops at more than 20 rural locations. Rural areas not near Interstate Highways 10 and 25, or U.S. Highways 54, 70, 82 and 180, or New Mexico Highway 90 are essentially without bus service. However, no portion of the SEPA is more than 50 miles from at least one intercity bus route. Buses carry both passengers and packages. Motor freight service is also offered by a number of trucking firms which pick up and deliver in all incorporated communities and at certain locations in unincorporated areas as well. Chief among these companies are O.N.C.-Hopper, Santa Fe Motor Freight, United Parcel Service, and Whitfield Transportation.

Approximately 50 taxicabs operating in the larger communities of the SEPA, and rental car agencies in Alamogordo, Las Cruces and Silver City afford residents without private automobiles temporary means of

FIGURE 5.1

HIGHWAY NETWORK SOUTHWESTERN NEW MEXICO SEPA, 1976



Source: Rand McNally, Road Atlas, 1977.

LEGEND

- (I) = Interstate
- (US) = U. S.
- (NM) = New Mexico

TABLE 5.9

MOTOR VEHICLE REGISTRATIONS, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>County</u>	<u>Number of Passenger Cars</u>	<u>Percent Increase 1966-1976</u>	<u>No. of Trucks & Other Vehicles</u>	<u>Percent Increase 1966-1976</u>	<u>Number of Motor Vehicles</u>	<u>Percent Increase 1966-1976</u>
Dona Ana	39,724	39.9	24,485	89.8	64,209	55.5
Grant	11,251	56.6	10,063	128.3	21,314	83.6
Hidalgo	2,466	12.1	2,145	53.7	4,611	28.2
Luna	6,723	5.8	5,551	102.9	12,274	35.1
Otero	20,595	50.4	13,135	107.3	33,730	71.2
Sierra	5,065	90.7	4,590	126.8	9,655	106.3
SEPA	85,824	42.6	59,969	106.6	145,793	62.0
New Mexico	585,323	39.0	390,699	90.7	976,022	55.9

Source: New Mexico Department of Motor Vehicles, List of Registrations, 1966-1976.

TABLE 5.10

HIGHWAY NETWORK AND AVERAGE DAILY VEHICLE MILES OF TRAVEL, SOUTHWESTERN NEW MEXICO SEPA, 1976

Road Type	Dona Ana County		Grant County		Hidalgo County	
	Average Daily Vehicle Miles	Percent of Total ADVM	Average Daily Vehicle Miles	Percent of Total ADVM	Average Daily Vehicle Miles	Percent of Total ADVM
Interstate	574,640	65.5	139,754	20.1	204,716	55.4
Federal-Aid ^a						
(Primary)	134,889	15.3	190,567	27.4	47,194	12.8
Federal-Aid (Secondary)	25,529	2.9	46,251	6.7	21,387	5.8
State	23,947	2.7	15,425	2.2	26,905	7.3
County and Local	16,247	1.8	124,873	18.0	4,500	1.2
Urban and Municipal	101,863	11.6	177,810	25.6	62,490	16.9
Unassigned	1,947	0.2	134	0.0	2,597	0.6
Total	879,062	100.0	694,814	100.0	369,789	100.0
Road Type	Luna County		Otero County		Sierra County	
	Average Daily Vehicle Miles	Percent of Total ADVM	Average Daily Vehicle Miles	Percent of Total ADVM	Average Daily Vehicle Miles	Percent of Total ADVM
Interstate	401,075	60.5	0	0.0	144,430	53.4
Federal-Aid ^a						
(Primary)	116,032	17.5	522,985	57.2	14,676	5.4
Federal-Aid (Secondary)	9,997	1.5	11,727	1.3	27,229	10.1
State	16,556	2.5	13,638	1.5	9,267	3.4
County and Local	20,486	3.0	33,180	3.6	15,396	5.7
Urban and Municipal	98,699	14.9	332,618	36.4	59,099	21.8
Unassigned	617	0.1	0	0.0	501	0.2
Total	663,462	100.0	914,148	100.0	270,598	100.0
Road Type	SEPA		New Mexico			
	Average Daily Vehicle Miles	Percent of Total ADVM	Average Daily Vehicle Miles	Percent of Total ADVM		
Interstate	1,464,615	38.6	2,132,219	20.3		
Federal-Aid ^a						
(Primary)	1,026,343	27.1	2,352,582	22.3		
Federal-Aid (Secondary)	142,120	3.7	630,910	6.0		
State	105,738	2.8	258,586	2.5		
County and Local	214,682	5.7	630,455	6.0		
Urban and Municipal	832,579	22.0	4,477,138	42.5		
Unassigned	5,796	0.1	42,184	0.4		
Total	3,791,873	100.0	10,524,074	100.0		

Notes: ^aExcluding interstate highways.^bExcluding federal-aid secondary highways.Source: New Mexico Highway Department, Planning and Programming Division, New Mexico Traffic Survey, 1977.

TABLE 5.11

ANNUAL AVERAGE DAILY TRAFFIC AT CONTROL LOCATIONS, BY VEHICLE TYPE,
SOUTHWESTERN NEW MEXICO SEPA, 1976

Station No.	Route No.	Station Location	Passenger Cars		
			New Mexico	Out-of- State	All Vehicles
1.	I-10	11.6 Miles W. of Lordsburg	636	3634	7465
2.	I-10	3.3 Miles W. of Deming	643	3203	7339
3.	I-10	Near Dona Ana/Luna County Line	926	3294	7689
4.	I-10	2 Miles N. of Port of Entry-Anthony	2499	4825	11624
5.	I-25	N. of Las Cruces	1273	694	3198
6.	I-25	S. of Jct NM 90, S. of T. or C.	1031	963	3162
7.	I-25	N. of T. or C.	899	895	2745
8.	US 54	9 Miles S. of Alamogordo	537	858	2184
9.	US 54	S. at Jct. US 82, N. of Alamogordo	4253	1854	10121
10.	US 54	N. at Jct. US 82, N. of Alamogordo	3584	1446	8500
11.	US 70	NW at Jct. NM 90, N. of Lordsburg	178	300	869
12.	US 70	S. at Jct. NM 90, N. of Lordsburg	463	441	1557
13.	US 70	3.3 Miles W. of Deming	643	3203	7339
14.	US 70	At Dona Ana/Luna County Line	926	3294	7689
15.	US 70	6 Miles NE of Las Cruces	3301	1405	6921
16.	US 70	SW at Entrance to White Sands Nat'l Monument	787	897	2636
17.	US 70	NE at Entrance to White Sands Nat'l Monument	841	954	2813
18.	US 70	S. at Jct. US 82, N. at Alamogordo	4253	1854	10121
19.	US 70	E. at Jct. US 82, N. at Alamogordo	902	525	2355
20.	US 70	2.5 Miles E. of Tularosa	991	884	3241
21.	US 82	6 Miles NE of Las Cruces	3301	1405	6921
22.	US 82	SW at Entrance to White Sands Nat'l Monument	787	897	2636
23.	US 82	NE at Entrance to White Sands Nat's Monument	841	954	2813
24.	US 82	S. at Jct. US 54, N. of Alamogordo	4253	1854	10121
25.	US 82	W. at Jct. US 54, N. of Alamogordo	902	525	2355
26.	US 180	12.5 Miles W. of Silver City	403	85	964
27.	US 180	W. at Entrance to Ft. Bayard	4243	667	7810
28.	US 180	E. at Entrance to Ft. Bayard	3546	659	6682
29.	US 180	NW at Jct. NM 25, N. of Deming	1211	422	2856
30.	US 180	S. at Jct. NM 25, N. of Deming	1454	659	3719
31.	US 180	At Dona Ana/Luna County Line	926	3294	7689
32.	US 180	2 Miles N. of Port of Entry-Anthony	2499	4825	11624
33.	NM 11	9.4 Miles S. of Deming	418	146	1124
34.	NM 26	NE at Jct. US 180, N. of Deming	353	258	1133
35.	NM 28	NE at Jct. NM 292, SW of Las Cruces	3422	410	5618
36.	NM 90	NE at Jct. US 70, N. of Lordsburg	331	150	796
37.	NM 332	W. of Jct. NM 11, S. of Deming	112	12	258
38.	NM 338	S. at Jct. I-10, W. of Lordsburg	203	108	596

Source: New Mexico Highway Department, Planning and Programming Division,
New Mexico Traffic Survey, 1977.

TABLE 5.12

HIGHWAY NETWORK AND CONDITION RATINGS, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Highway</u>	<u>Segment Location</u>	<u>Length</u>	<u>Condition Rating</u>	<u>Specific Deficiency</u>
I-10	Arizona-New Mexico border to New Mexico-Texas border	164.3	A	none
I-25	New Mexico-Texas border to Sierra-Socorro County line	82.9	A	none
U.S. 54	New Mexico-Texas border to Alamogordo	62.6	C	15.9 miles deficient in safety -- 10.1 miles insufficient in capacity.
U.S. 54	Alamogordo to Otero-Lincoln County line	39.0	B	none
U.S. 70	Arizona-New Mexico border to Lordsburg	29.3	A	none
U.S. 70/ 82	Las Cruces to Alamogordo	70.4	B	7.0 miles deficient in safety 5.0 miles insufficient in capacity -- 5.0 miles of deteriorated surface.
U.S. 70	Tularosa to Otero-Lincoln County line	23.6	C	18.0 miles deficient in safety 10.0 miles insufficient in capacity.
U.S. 180	Deming to Silver City	51.6	B	20.8 miles deficient in safety 18.8 miles insufficient in capacity -- 2.6 miles of deteriorated surface.
U.S. 180	Silver City to Grant-Catron County line	54.4	B	7.8 miles deficient in safety.
N.M. 11	Mexico-New Mexico border to Deming	33.9	B	8.6 miles deficient in safety 2.6 miles of deteriorated surface.
N.M. 26	Deming to Hatch	47.7	B	3.3 miles deficient in safety 19.2 miles of deteriorated surface.
N.M. 28	Mexico-New Mexico border to Las Cruces	47.9	D	14.4 miles deficient in safety 3.2 miles of deteriorated surface -- 26.9 miles de- ficient in safety.
N.M. 90	Lordsburg to Silver City	42.7	D	26.9 miles deficient in safety 15.9 miles of deteriorated surface -- 11.0 miles of de- teriorated foundation.
N.M. 338	Lordsburg to Animas	24.3	B	none

Note: Condition Ratings as given by New Mexico Highway Department: 0-25 (very poor) = D; 26-50 (poor) = C; 51-75 (fair) = B; 76-100 (good) = A.

Source: New Mexico State Highway Department, Ratings for Highway Improvements, 1976.

local and short-distance travel. However, individually owned cars and pickup trucks account for most of the vehicles utilizing highways in the region. Table 5.9 details automobile registrations for the SEPA. As it indicates, both cars and trucks greatly increased in number between 1966 and 1976. Figure 5.1 identifies major roadways and Table 5.10 indicates the recorded number of miles traveled by cars and trucks on an average day in 1976 by highway type. The two most important routes are undoubtedly Interstate Highways 10 and 25--the latter running north from its junction with the former at Las Cruces to Albuquerque and eventually Denver, and Interstate 10 running west from El Paso to Tucson and ultimately Los Angeles. Together these Interstate routes account for 38.6 percent of average daily vehicle miles in the SEPA. The only county in which they do not figure is Otero, which is not crossed by any component of the Interstate System.

Levels of traffic for particular roads are suggested by Table 5.11. On certain highways, increasing use by motorists has resulted in physical deterioration of surfaces and foundations. On others, traffic now exceeds design capacities or has created safety problems. Table 5.12 identifies these road segments. A major deficiency in the highway system of the SEPA is the two-lane width of most roads. Congestion is common during peak periods of travel during the summer months and on holiday weekends in the winter. Such overloading of roads is typical of the Cloudcroft and Mescalero areas of Otero County, in particular. Recent proposals by the state government have recommended widening of U.S. Highways 54, 70 and 82. The proposed improvement of Route 70 would upgrade that highway to Interstate equivalency.

An estimated 85 percent of all roads in the SEPA are unpaved. A large percentage of these afford access to public lands and are little more than dirt tracks, frequently impassable in wet weather. While improvement of major highways continues each year with appropriations from the state legislature, county governments in the SEPA have undertaken little new construction or major improvements in their existing road networks. No spending is planned for the purposes of providing new, or improving existing, access to public lands. State and local road improvements occurring are in direct response to traffic pressures associated with population growth. Ongoing major improvements are located in close proximity to private lands in urban areas. The one exception in 1977 would be five miles of new bituminous surfacing which was laid on an existing gravel bend in Otero County which provides improved access to the BLM-managed Three Rivers petroglyphs site.

The present BLM road plan for the Las Cruces District is several years old; there is a definite need for identification and programming of those routes which should be improved. Insofar as such improvement would affect all resources, it must follow careful planning. At present, the primary contribution made by public lands to transportation in the SEPA has been in rights-of-way and construction materials

TABLE 5.13

COMMUNICATIONS FACILITIES, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Medium</u>	<u>Number, by County</u>						
	<u>Dona Ana</u>	<u>Grant</u>	<u>Hidalgo</u>	<u>Luna</u>	<u>Otero</u>	<u>Sierra</u>	<u>SEPA</u>
Newspapers, Total ^c	3	2	1	1	3	2	12
Daily	2	1	0	0	1	0	4
Weekly or Bi-weekly	1	1	1	1	2	2	8
Radio Stations, Total ^c	7	2	0	1	2	1	13
FM Band	4	0	0	0	0	0	4
AM Band	3	2	0	1	2	1	9
Television Channels, Total ^a	13	9	6	12	8	7	17 ^a
Local	1	0	0	0	0	0	1
Cable and Outside ^b	12	9	6	12	8	7	16

Notes: ^aIncludes only different broadcasting stations.

^bIn selected locations with special equipment greater reception is possible.

Sources: ^cMountain States Telephone & Telegraph Company, New Mexico News Media Guide, 1977.

^dNew Mexico Department of Development, Community Profiles, 1977.

TABLE 5.14

TELEPHONE UTILITIES, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Company or Cooperative</u>	<u>Number of Customers by County</u>						<u>Sierra</u>	<u>SEPA</u>
	<u>Dona Ana</u>	<u>Grant</u>	<u>Hidalgo</u>	<u>Luna</u>	<u>Otero</u>			
Continental Telephone Company	0	0	0	0	0		2,750	2,750
General Telephone Company	0	0	0	0	750		0	750
Mountain States Telephone & Telegraph Company	45,105	13,310	2,335	7,820	25,645		200	94,415
Penasco Valley Telephone Cooperative	0	0	0	0	150		0	150
Valley Telephone Cooperative	0	0	200	0	0		0	200
Western New Mexico Telephone Company	0	400	0	200	0		0	600
Telephone Utilities, Total	45,105	13,710	2,535	8,020	26,545		2,950	98,865

Source: Harbridge House, Inc. estimates based on telephone company directory listings; all numbers have been rounded.

for construction and improvement of Interstate, U.S., and New Mexico Highways. Needs for both will continue, requiring further action by BLM in preparing environmental assessment records, authorizing use of public lands, and assuring compliance with stipulations. Generally, sufficient funds are available to state, county and local governments to complete necessary road work as traffic increases. Although revenues accruing to the various Road Funds of most counties in the SEPA are budgeted to be lower in 1977-1978 than in the previous fiscal year, actual expenditures are projected to be greater. Operating expenses for roads are estimated to double in 1977-1978 over the prior year's actual expenditures in all but Grant County. Road expenses comprise between 12 percent (Dona Ana and Hidalgo Counties) to 33 percent (Luna County) of that county's total 1976-1977 expenditures.

Monies actually expended for road purposes is dependent upon political decisions at all levels of government. Current commitment to highway maintenance and improvement in the SEPA is adequate to accommodate present, slow processes of change, but would not necessarily be adequate with development of a major project which added significantly to regional and local traffic.

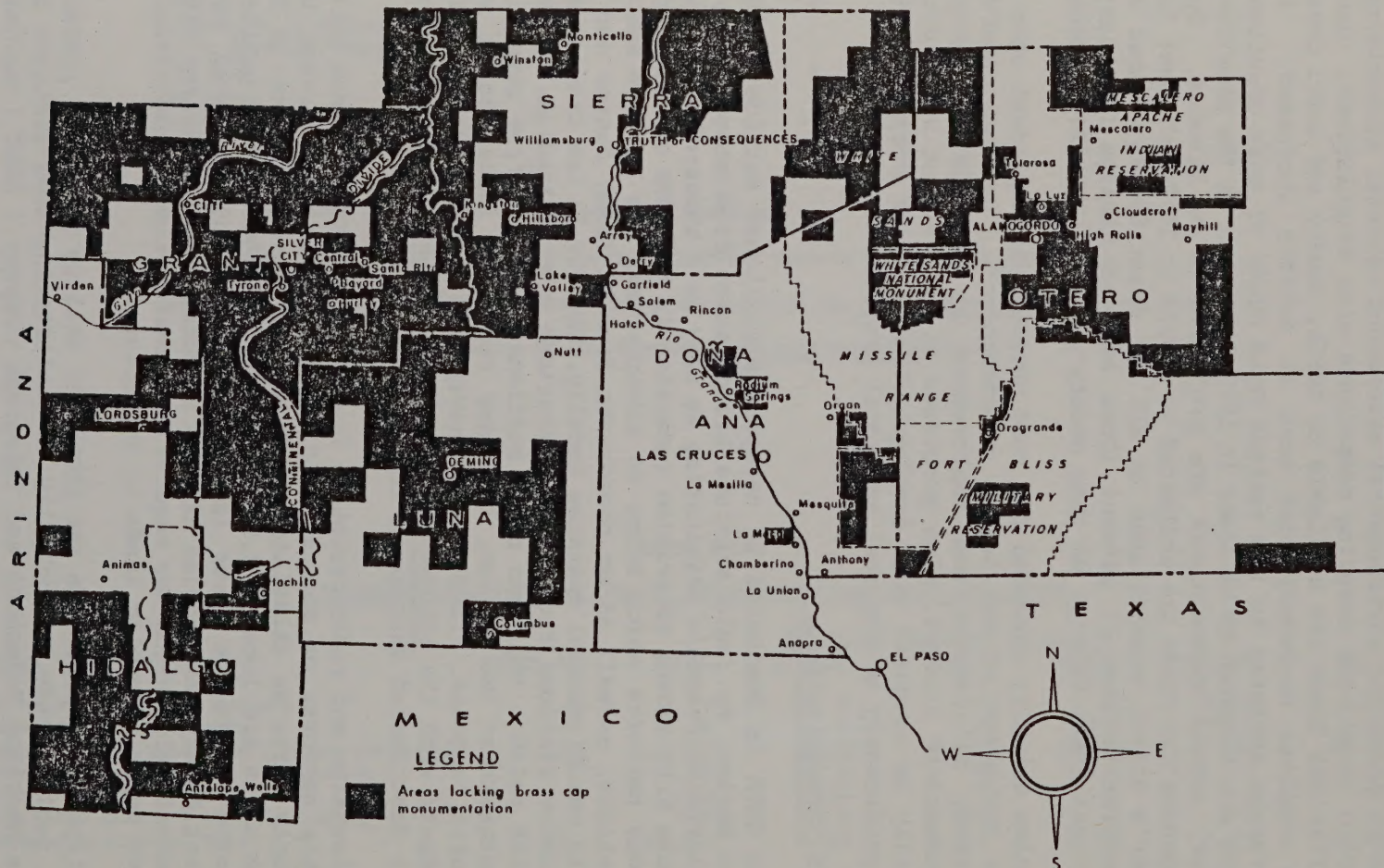
5.3 Communications

The SEPA is dominated by newspapers published outside southwestern New Mexico, by radio stations broadcasting from other areas, and by television channels originating as many as a thousand miles away. As Table 5.13 shows, television reception in the SEPA chiefly depends on cable networks which bring in Albuquerque, Los Angeles and Phoenix stations, as well as on broadcasts from El Paso, Juarez and Tucson. Only one TV channel operates locally, KRWG-TV in Las Cruces, although booster stations from El Paso stations are located in the SEPA, as noted below. Thirteen radio stations broadcast from communities in southwestern New Mexico, but many residents listen to El Paso and Juarez programs. Likewise, 12 newspapers are published locally, but compete with the Albuquerque Journal and El Paso Times, both of which are distributed throughout the SEPA.

Television and radio reception in most of the SEPA depends entirely on cable networks or booster stations. Two microwave towers in Otero County serve as television repeaters for three stations in El Paso. The units are located 2.5 miles north of Orogrande on public lands. Another microwave tower is located in the Gila National Forest in Grant County and carries El Paso broadcasts to the Silver City area. Communication needs may require the construction of additional microwave units on public lands in the future.

Telephone companies in the SEPA also utilize microwave installations on public lands, principally in facilitating long-distance calling. The American Telephone and Telegraph Company (AT&T) maintains two

FIGURE 5.2
LAND SURVEY GRID
SOUTHWESTERN NEW MEXICO SEPA, 1976



Source: Information as supplied by the Bureau of Land Management, 1978.

sites in Otero County, one which is 6.2 miles north of Orogrande on public lands and another which is 27.2 miles south-southeast of Orogrande on patented land. AT&T long-distance cables cross the SEPA from east to west. A check station for telephone transmissions is located in Hidalgo County, at Lordsburg.

Local telephone service is detailed in Table 5.14. As shown in the table, six companies operating in the SEPA have a total of 98,865 installed connections, including both commercial and residential customers. Mountain States Telephone and Telegraph Company, the regional subsidiary of AT&T, services 94,415 of these connections. Most of the remaining telephones in the SEPA belong to other national systems: those of Continental Telephone Company of Reston, Virginia, or General Telephone and Electronics Company of New York City. Exceptions are telephones in cooperative service areas. These areas are for the most part rural and often isolated. Residents with connections suffer from poor service and frequent outages; residents without connections lack what has come to be regarded as an essential utility.

County governments and regional councils of governments are working with telephone companies and cooperatives to extend service to areas now lacking it and to improve service in areas most often experiencing problems. These efforts will require rights-of-way for telephone cables through public lands, principally in northern Grant, southern Hidalgo, eastern Otero and western Sierra Counties. BLM itself uses local communications systems to inform and involve the public, and some permittees are residents of those areas which will require new rights-of-way.

5.4 Land Survey Grid

Cadastral surveys are essential to the effective management of public lands. Prior to 1910, all section and quarter-section corners were marked by wooden stakes or stone monuments. With the passage of time, many of these markers have become partially or entirely obliterated. After 1910, the use of brass capped posts to mark corners has resulted in a more permanent survey. Brass cap surveys are more accurate both because of the permanency of corner monumentation and because of more advanced methods and higher standards applied to surveying after 1910. Only a relatively few sections of public lands in the Las Cruces District have not been resurveyed. However, many areas not administered by the Bureau of Land Management have not had brass cap monumentation. Figure 5.2 shows the extent of the resurvey. An estimated ten quarter sections have never been surveyed. These areas lie within remote portions of the Gila and Lincoln National Forests.

TABLE 5.15

ELECTRIC AND NATURAL GAS UTILITIES, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Company or Cooperative</u>	<u>Area Served</u>	<u>No. of Customers</u>	<u>Capacity (kw)</u>	<u>Use (No. of kwh used in 1 year)</u>	<u>Comments</u>
Columbus Electric Cooperative	Grant, Hidalgo & Luna Counties	2,190	25,000	179,642,500	planning additional distribution station (5,000 kw) 13 miles of transmission line (69,000 volt) in Hidalgo County.
Community Public Service Company	Grant, Hidalgo, Luna, & Otero Counties	23,445	103,700 ^a	245,000,000 ^a	
Duncan Valley Electric Cooperative	Grant & Hidalgo Counties	2,330	2,500	6,000	minor improvements under way in Virden area.
El Paso Electric Company	Dona Ana, Otero & Sierra Counties	34,610	127,500	598,010,720	plan to add new substation in 1979 which will increase capacity in Dona Ana County by 20,000 kw.
Otero Electric Cooperative	Otero County	6,850	15,000 ^b	57,809,493 ^b	
Public Service Co. of New Mexico	Luna County	5,410	3,800	74,110,747	plan to add new substation by 1981, considerably increasing capacity.
Sierra Electric Cooperative	Sierra County	1,850	6,500	14,435,000	
Truth or Consequences City Power Department	Sierra County	2,815	8,000	3,940,000	planning expansion of system.
El Paso Natural Gas Company	Dona Ana, Hidalgo & Luna Counties	17,195	n.a. ^c	n.a.	
Gas Company of New Mexico	All Counties in SEPA	18,280	n.a.	n.a.	

Note: ^a Estimated, pending receipt of further information.

^b Data applies to entire service area for Otero County Electric Cooperative, including Otero, Chavez, and Lincoln Counties.

^c n.a. - not applicable.

Source: Harbridge House, Inc., estimates based on conversations with company and cooperative representatives.

Survey needs in the SEPA are few at present. The 15-year plan for the Las Cruces District Office suggests that two sections near Anapra in Dona Ana County where trespass occupancy is occurring, seven sections in areas of active minerals exploration in Grant County, and five sections near Hachita in Hidalgo County where trespass occupancy is also suspected will need to be resurveyed. There are no other known needs for new monumentation, although mining claims, trespass occupancy, or proposed developments may suggest others in the future.

5.5 Electric and Natural Gas Utilities

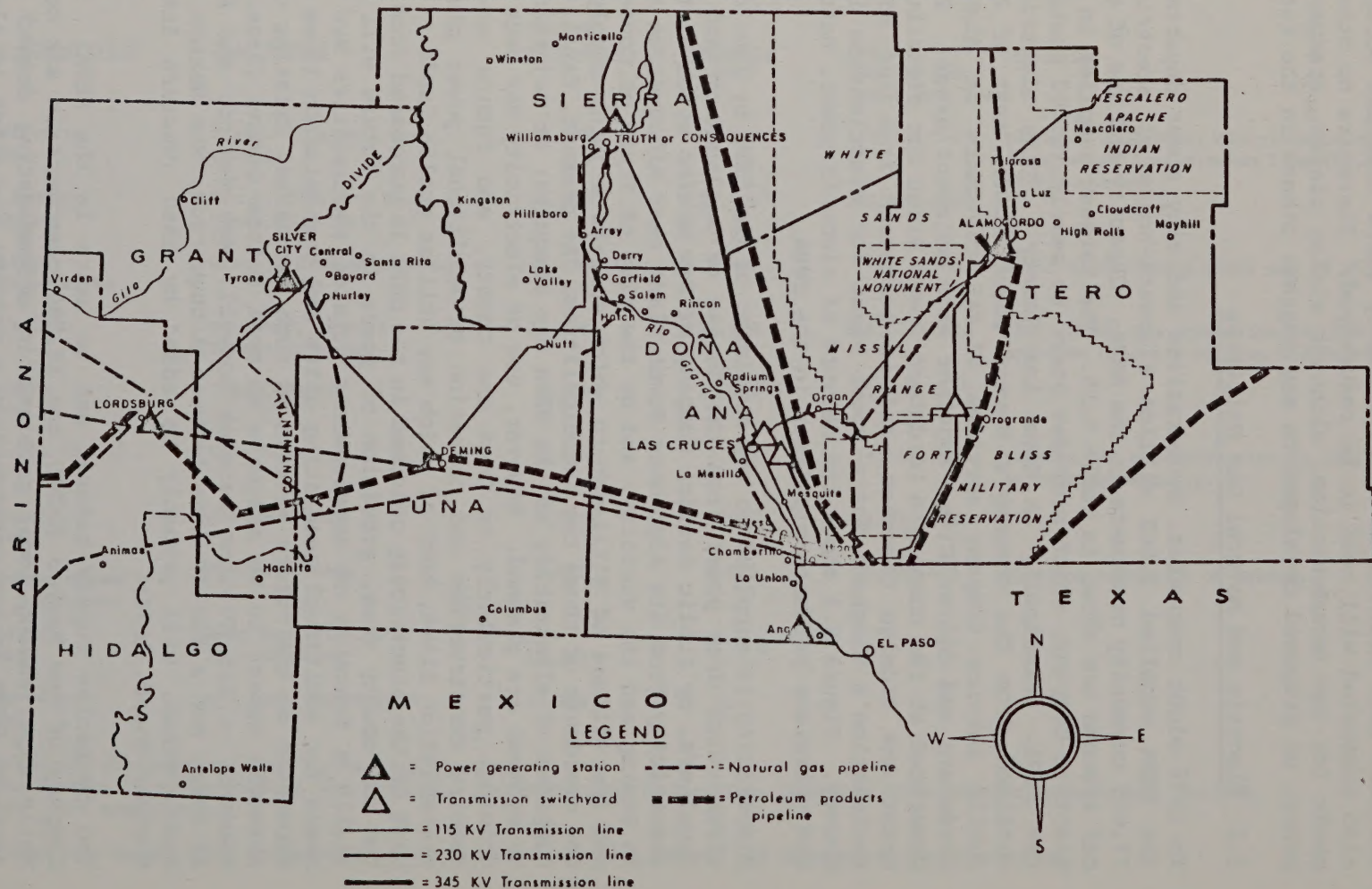
In 1976 eight companies, cooperatives and city power departments in the SEPA supplied 1,062 million kilowatt-hours of electricity to 77,665 community consumers in the SEPA. Capacity and use of electrical systems are shown in Table 5.15. The largest supplier is El Paso Electric Company, which provides power to nearly 35,000 customers in the SEPA, principally in Dona Ana County. This electricity is obtained from the company's Newman Power Plant, east of Anthony. Public Service Company services 23,445 customers in Alamogordo, Lordsburg and Silver City, together with adjacent areas. Power is generated at the company's Lordsburg Power Plant for distribution to Grant and Hidalgo Counties, and is purchased from the Bureau of Reclamation's Elephant Butte Power Plant for distribution in Otero County. Figure 5.3 shows the network of electric power, natural gas and petroleum products pipelines in the SEPA.

Electricity is supplied to the remainder of the SEPA by four cooperatives which draw power from the Bureau of Reclamation and private suppliers, by Public Service Company of New Mexico which distributes electricity from its Algodones Power Plant near Albuquerque to users in Deming and the vicinity, and by the city of Truth or Consequences and the village of Williamsburg which operate a joint supply system for residents of those two municipalities. At present, facilities and supplies of electricity to the SEPA are adequate; no major additions to systems are planned. However, use of electricity has been rapidly growing, particularly in Dona Ana County, and future needs will require construction and operation of additional power plants and transmission lines, both of which may utilize public lands. Because much of the electricity consumed in the SEPA is purchased from outside the six-county area, provision of power in the future will be partially a function of developments outside southwestern New Mexico. Needs for additional generating units and transmission lines will be dependent on the future pattern of such purchases. Existing corridor networks appear to be adequate to meet future demand (Page, 1974). However, a 345 KV line between Roswell, New Mexico, and Phoenix, Arizona, and a 500 KV line between Albuquerque, New Mexico, and El Paso, Texas, will probably be added by 1990 (Western Interstate Nuclear Board, 1974).

Two companies supply natural gas to users in the SEPA. The Gas Company of New Mexico (GCNM) has 18,280 customers in six counties. While experiencing local problems in accommodating demand for gas service, GCNM is now constructing a propane air plant in Alamogordo

FIGURE 5.3

ELECTRIC POWER, NATURAL GAS, AND PETROLEUM PRODUCTS TRANSMISSION LINES
SOUTHWESTERN NEW MEXICO SEPA, 1976

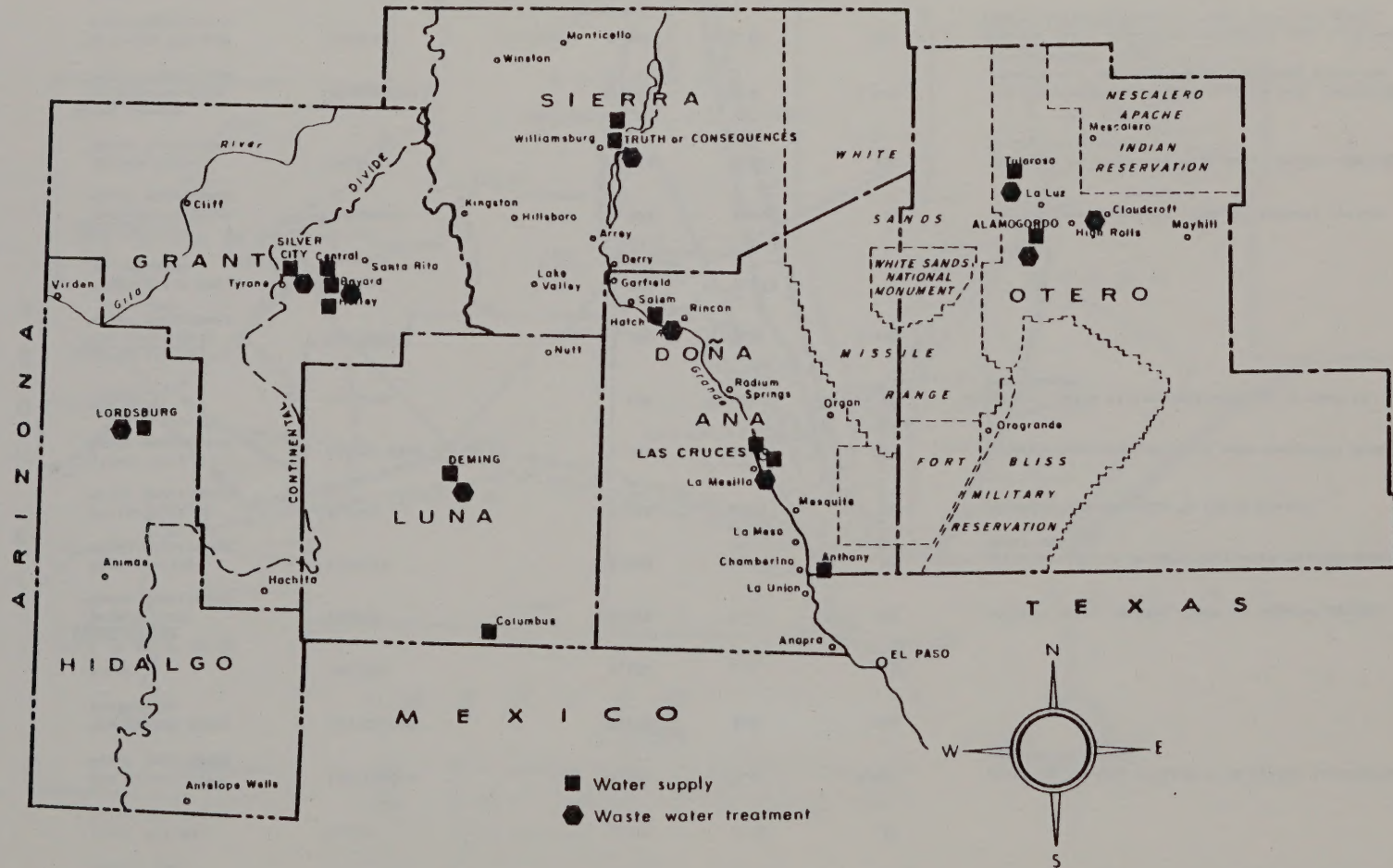


WATER SUPPLY SYSTEMS, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Water Supply System</u>	<u>Community Served</u>	<u>No. of Users</u>	<u>Capacity</u> (millions of gallons/day)	<u>Use</u>	<u>Comments</u>
<u>Dona Ana County</u>					
Anthony Water Works, Inc.	Anthony	1,800	0.179	65	improvements under way to bring system up to standard.
Hatch Village Water Department	Hatch	1,500	0.78	25	
Las Cruces City Water Department	Las Cruces	38,000	22.5	2,900	planning gradual expansion of system to accomodate population growth.
New Mexico State University	Las Cruces	4,200	4.2	352	
Other	various	4,500	n.a.	65	
<u>Grant County</u>					
Bayard City Water Department	Bayard	2,900	1.0	95	problem area; seeking funds to improve system.
Central City Water Department	Central	1,900	0.9	80	operating close to capacity; need to seek new water sources.
Hurley Village Water Department	Hurley	1,700	1.44	88	planning improvements in North Hurley.
Silver City Water Department	Silver City	8,000	3.3	490	recently improved; need to seek new water sources.
Other	various	600	n.a.	28	several small village systems are in need of improvement.
<u>Hidalgo County</u>					
Lordsburg City Water Department	Lordsburg	3,400	2.6	410	
Rodeo Water Users Association	Rodeo	70	0.072	3	
<u>Luna County</u>					
Columbus Village Water Department	Columbus	350	0.036	11	problem area; seeking funds to improve system.
Deming City Water Department	Deming	10,650	5.66	750	planning to drill new well which would slightly increase capacity.
<u>Otero County</u>					
Alamogordo City Water Department	Alamogordo	23,600	12.0	1,560	new treatment plant will replace old, inadequate equipment & outdated plant; pursuing plans for new treatment plant.
Tularosa Village Water Department	Tularosa	3,900	0.45	175	problem area; inadequate equipment and outdated plant; pursuing plans for new treatment plant.
Other	various	1,500	n.a.	48	several small village systems are in need of improvement.
<u>Sierra County</u>					
Lake Shore City Sanitation District	area surrounding Truth or Consequences	700	.8	25	
National Utilities System	Truth or Consequences	350	35.0	3	
SEPA	all	109,620	90.917	7,173	numerous small systems throughout SEPA in need of improvement.

Source: Harbridge House, Inc., estimates updated from Allan Randall and Joe Dewbre, Inventory of Water Diversions and Rate Structures for Cities, Towns, and Villages in New Mexico, 1972; and information provided by New Mexico Environmental Improvement Agency, 1978.

FIGURE 5.4
PUBLIC WATER SUPPLY AND WASTE WATER TREATMENT SYSTEMS
SOUTHWESTERN NEW MEXICO SEPA, 1976



Source: Information as supplied by the New Mexico Environmental Improvement Agency, Councils of Government, Counties and Municipalities, 1978.

which will increase its capacity to meet area needs. El Paso Natural Gas is a wholesaler of natural gas to local private and municipal distributors with 17,195 customers in three counties. Some of these distributors have encountered difficulties in obtaining sufficient low-cost supplies of natural gas; natural gas hookups in Dona Ana County in particular, have been slowed. No plans presently exist to construct major new facilities in the SEPA.

5.6 Water Supply, Wastewater Treatment, and Solid Waste Disposal

Wells constitute the primary source of water for municipal and industrial use in the SEPA. Diversions from rivers and streams provide water for agricultural irrigation. Water supply systems are confined to larger communities; in rural areas, individual wells and springs meet the needs of separate households, while irrigation and canal companies distribute water to which individuals own rights. Table 5.16 details the number of users of municipal and industrial water supply systems in the SEPA and contrasts use with supply. The largest of these systems is operated by the city of Las Cruces utilizing three recently drilled wells, from which the city is now drawing at less than capacity; it is holding two additional wells out of production. However, continued growth of areas along the mesa east of the city is expected to require a planned \$4 million water project. Alamogordo is the only other community utilizing more than a billion gallons of water a year and draws its water from surface and underground sources in the Sacramento Mountains. Water supply systems in the SEPA are shown in Figure 5.4.

Water supplies throughout the SEPA are limited. Lack of water is a major constraint on the growth of communities in the area, especially subdivisions and villages which lack the capital to develop water resources, or to purchase water rights. The poor quality of groundwater formations in many parts of the SEPA presents a difficult problem, especially in Otero County. In urban areas and developing communities, like La Luz near Alamogordo, return flows from poorly designed wastewater treatment systems have contaminated aquifers and threatened existing water supplies. Runoff from streets and buildings is also polluting water resources. In much of the SEPA, groundwater formations occupy closed basins within which development requires approval of the state engineer. Restrictions on groundwater use reflect the limited quantity and poor quality of most reserves in southwestern New Mexico.

All incorporated communities in the SEPA have centralized sewer treatment plants and wastewater collection lines. Central sewer facilities are shown in Figure 5.4. Table 5.17 details the characteristics of wastewater systems, giving present capacities and average flows. Development of unincorporated areas near Alamogordo and

TABLE 5.17

WASTEWATER TREATMENT SYSTEMS, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>System</u>	<u>Capacity</u> (gallons/day)	<u>Flow</u> (gallons/day)	<u>Comment</u>
Dona Ana County			
Hatch	100,000	40,000	No plans for expansion.
Las Cruces	5,000,000	4,250,000	Expansion being considered.
Grant County			
Bayard	55,000	60,000	Overloaded, with plans for new facility serving Bayard, Central and other areas being considered.
Silver City	1,000,000	1,000,000	New facility under construction, scheduled to open March, 1979 with capacity of 2.5 million gallons daily.
Hidalgo County			
Lordsburg	792,000	432,000	No plans for expansion
Luna County			
Deming	50,000	1,600,000	Overloaded, with funds being sought for new facility.
Otero County			
Alamogordo	4,000,000	1,700,000	Expansion being undertaken, with capacity of 5.0 million gallons daily.
Cloudcroft	500,000	100,000	Flow fluctuates seasonally.
Sunspot	15,000 -not monitored-		No plans for expansion.
Tularosa	500,000	200,000	No plans for expansion.
Sierra County			
Truth or Consequences	1,250,000	800,000	No plans for expansion.

Source: Information as supplied by the New Mexico Environmental Improvement Agency councils of government, counties, and municipalities, 1978.

FIGURE 5.5
SOLID WASTE DISPOSAL FACILITIES
SOUTHWESTERN NEW MEXICO SEPA, 1976



Source: Information as supplied by the New Mexico Environmental Improvement Agency, Councils of Government, Counties and Municipalities, 1978.

TABLE 5.18

SOLID WASTE DISPOSAL FACILITIES, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>County/Municipality</u>	<u>Type</u> ^a	<u>Size</u> (acres)	<u>Life-span</u> (years) (from 1976)	<u>Comments</u>
Dona Ana County				
Anapra	M	20	11	
Anthony	M	10	6	
Butterfield Park	M	5	8	
Chaparral	M	10	8	
Dona Ana	M	10	2	being expanded.
Garfield	M	5	11	
Hill	M	10	4	scheduled to close in 1980.
La Mesa	M	10	7	
La Mesilla	S	40	8	
La Union	M	10	7	
Las Cruces	S	80	27	
Mesquite	M	20	10	
Organ	M	10	2	scheduled to close in 1978, but expected to be used beyond life-span.
Rincon	M	10	4	
Salem	M	20	11	
Grant County				
Silver City	S	3	3	new landfill being designed for use after 1979.
Hidalgo County				
Animas	M	5	5	
Lordsburg	S	10	10	
Rodeo	M	5	5	at two sites.
Virden	M	5	5	
Luna County				
Deming	S	59	35	
Otero County				
Alamogordo	S	n.a.	n.a.	city-operated.
Alamogordo-North	S	20	12	serves part of Alamogordo, Cloudcroft, High Rolls, La Luz, Sunspot, and Tularosa.
Mayhill	M	n.a.	n.a.	
Sierra County				
Truth or Consequences	S	10	10	

Note: ^aM=modified, S=sanitary.

Source: Information as supplied by the New Mexico Environmental Improvement Agency, Councils of Government, Counties and Municipalities, 1978.

Las Cruces, however, is creating serious problems for preservation of water quality. The city of Las Cruces is seeking federal and state aid for a new treatment plant for areas of growth within and adjacent to municipal limits. Existing facilities will be inadequate by the early 1980's. In the Alamogordo area, most of the relatively recent subdivisions in unincorporated areas as well as the long-standing farm and ranch homes in the SEPA make use of septic tanks for disposal of liquid wastes. Concentrations of septic tanks saturate soils with wastewater and contaminate underground water formations. In long-range plans, regional sewage treatment facilities have been proposed for Dona Ana and Otero Counties.

Landfills are operating in each county, as shown in Figure 5.5 and Table 5.18. With the exception of Dona Ana County, these operations are relatively small and expansion will be required. In Dona Ana County, public lands are expected to serve as locations for new solid waste disposal sites, such as the planned Dona Ana landfill.

5.7 Fire Control

The manpower of fire-fighting agencies in the SEPA is shown, by county, in Table 5.19. All counties have manpower far beyond the recommended 18 firemen per thousand residents standard of the International City Management Association. Detailed references are given in Table 5.20, including an indication of capabilities. Few of the departments shown are equipped or available to fight fires on public lands, although they are able to cope with fires in the immediate vicinity of those communities for which they are responsible. Exceptions exist in Dona Ana County where the Las Cruces City Fire Department is capable of providing support elsewhere on demand, in Grant County where the Silver City Fire Department has cooperative agreements with the Forest Service, and in Otero County where the Alamogordo City Fire Department has the capability for limited support. Local fire departments possess generally adequate sources of funding to control fires in areas for which they have prime responsibility. Revenues and expenditures have expanded as these areas have grown.

Responsibility for fire control and prevention in regard to public lands in the SEPA rests with the Las Cruces District Office in conjunction with the Forest Service. BLM has cooperative fire-fighting arrangements with seven state and five federal agencies. The Boise Fire Control Center is called in to handle serious fires. The New Mexico State Forestry Department has responsibility for suppression of fires on all state and private lands in southwestern New Mexico.

The Las Cruces District Office handles control of fires on public lands in the SEPA. The office has available one 100-gallon pumper, one 150-gallon pumper and one 200-gallon pumper. Twenty persons are assigned to the fire-fighting unit. If additional fire fighters are needed, assistance can be requested from the Forest Service. Although

TABLE 5.19

FIRE CONTROL AGENCIES, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Agency</u>	<u>Number of Personnel, by County</u>						
	<u>Dona Ana</u>	<u>Grant</u>	<u>Hidalgo</u>	<u>Luna</u>	<u>Otero</u>	<u>Sierra</u>	<u>SEPA</u>
Municipal Fire Departments	92	63	16	26	108	21	326
Volunteer Fire Departments	320	20	20	15	230	40	645
Federal and Indian Fire-fighting Units	20	70	30	0	143	0	263
Total	432	153	66	41	481	61	1,234
Firemen per 1,000 of Population	5.3	6.2	11.6	2.8	11.3	7.2	6.9

Source: Harbridge House, Inc. based on information received from local governments and fire departments.

TABLE 5.21

LAW ENFORCEMENT AGENCIES, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Agency</u>	<u>Number of Personnel, by County</u>						
	<u>Dona Ana</u>	<u>Grant</u>	<u>Hidalgo</u>	<u>Luna</u>	<u>Otero</u>	<u>Sierra</u>	<u>SEPA</u>
State Police Department	15	3	2	4	14	3	41
County Sheriff's Department	37	20	6	18	7	5	93
Municipal and other Police Departments	88	31	8	14	48	13	202
Law Enforcement Agencies Total	140	54	16	36	69	21	336
Policemen per 1,000 of Population	1.7	2.2	2.8	2.5	1.6	2.5	1.9

Source: Harbridge House, Inc. based on information received from New Mexico State Police, county and local departments.

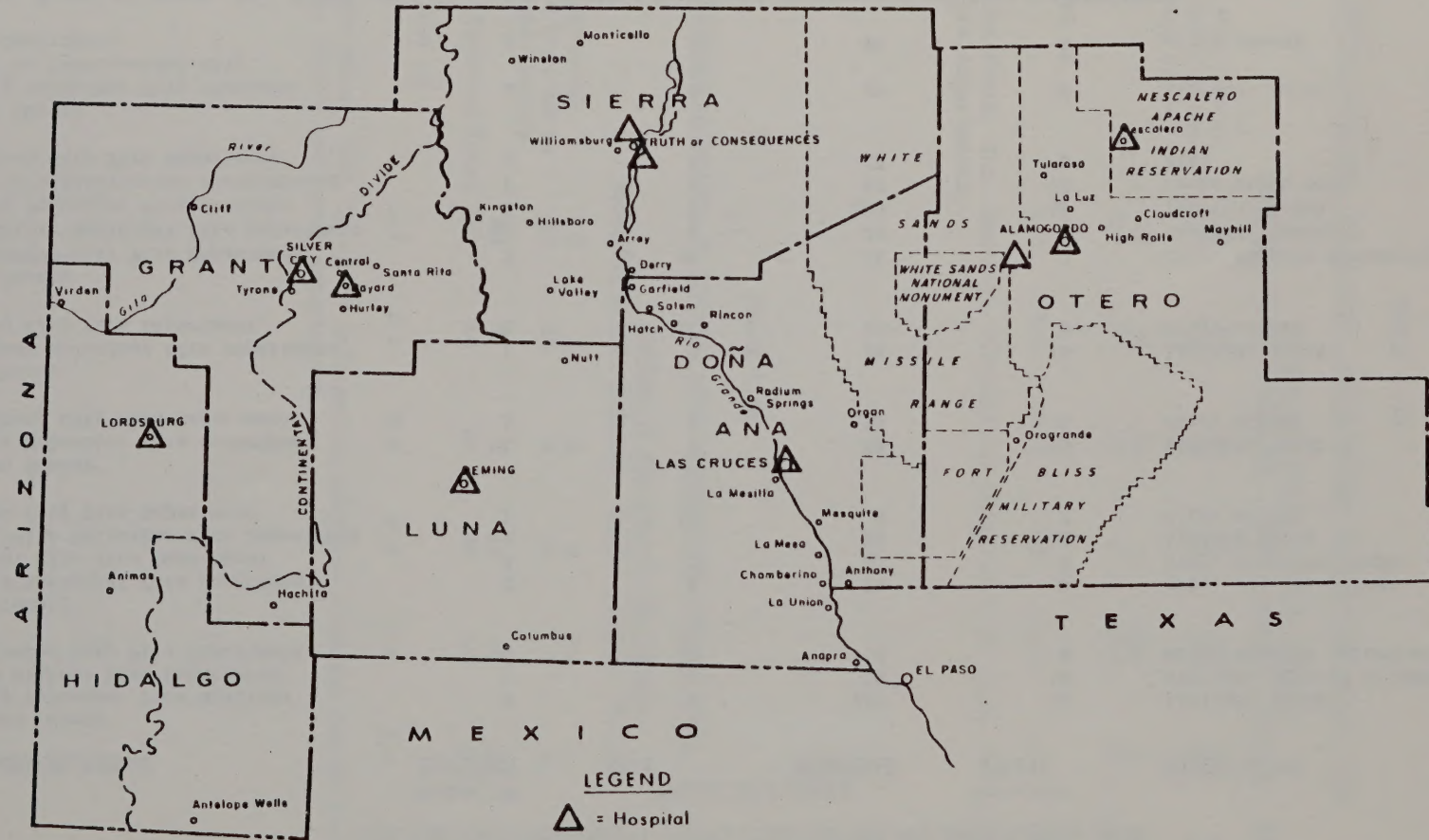
TABLE 5.20

FIRE CONTROL AGENCIES, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Fire Control Agency</u>	<u>Number of Stations</u>	<u>Number of Firemen</u>		<u>Insurance Rating</u>	<u>Capabilities</u>
		<u>Full</u>	<u>Volunteer</u>		
Dona Ana County					
County Volunteer Fire Stations	8	0	320	10	limited, local
Hatch Village Fire Department	1	0	25	10	village, support elsewhere on demand
Las Cruces City Fire Department	3	67	0	6	city, support elsewhere on demand
Grant County					
Bayard Municipal Fire Department	1	0	24	8	city, adjacent areas
Central City Fire Department	1	2	20	8	city, adjacent areas
Cliff-Gila Volunteer Fire Department	1	0	20	10	limited local
Silver City Fire Department	1	17	0	7	city, county
Hidalgo County					
Animas Volunteer Fire Department	1	0	20	10	limited, local
Lordsburg City Fire Department	1	0	16	8	city, county
Luna County					
Columbus Volunteer Fire Department	1	0	15	10	limited, local
Deming City Fire Department	1	16	10	8	city, county
Otero County					
Alamogordo City Fire Department	2	35	11	7	city, support elsewhere on demand
Cloudcroft Municipal Fire Department	1	0	40	8	limited, local
County Volunteer Fire Stations	7	0	230	10	limited, local
Mescalero Reservation Firefighters	1	0	43	10	reservation only
Tularosa City Fire Department	1	2	20	8	city
Sierra County					
County Volunteer Fire Stations	2	0	40	10	limited, local
Truth or Consequences City Fire Department	1	1	20	8	city, county

Source: Harbridge House, Inc. based on information received from local governments and fire departments.

FIGURE 5.6
HEALTH CARE FACILITIES
SOUTHWESTERN NEW MEXICO SEPA, 1976



Sources: New Mexico Department of Health and Environment, Bureau of Health Planning and Development, List of Hospital Facilities in New Mexico, 1977.
 American Hospital Association, Guide to the Health Care Industry, 1977.

the BLM does not possess any aircraft for use in fire fighting, or any supplies of fire retardant chemicals, these are also available from Forest Service offices at Alamogordo and Silver City. The Forest Service maintains a very extensive fire-fighting observation and training center at Silver City. Large fires may require a request for assistance from outside the SEPA.

In 1976, there were five fires on public lands, involving an estimated 40.85 acres. During the preceding five-year period, 48 fires had required organized fire-fighting efforts. The number of fires ranged from four each in 1972 and 1976 to 22 in 1974. The average number of acres burned was 238 and ranged from zero in 1976 to 5,040 in 1974. Problems affecting fire fighting on public lands are chiefly those of restricted access and insufficient water supplies.

5.8 Law Enforcement

The manpower of law enforcement agencies in the SEPA is summarized in Table 5.21. Only Dona Ana and Otero Counties have fewer than the 2.0 officers per thousand residents recommended by the Federal Bureau of Investigation. Municipal policemen are usually restricted to areas within incorporated limits. Officers of the county sheriffs' departments and of the New Mexico State Police will respond to calls involving public lands, but do not patrol these areas. In most instances, county personnel have prime jurisdiction over public lands. In addition to the personnel shown in Table 5.21, the Border Patrol has 80 officers stationed in the SEPA, while the New Mexico Department of Game and Fish has eight wardens in the six-county area. State, county, and local budgets for law enforcement have been increasing slowly in recent years, and appear adequate to accommodate present processes of change.

5.9 Search and Rescue

The New Mexico State Police and the New Mexico Emergency Services Council have the overall responsibility for coordination of search and rescue operations within the SEPA. State rescue coordinators organize and evaluate rescue situations. They utilize rescue teams composed entirely of volunteers which will operate on public lands as needed. The U.S. Army, U.S. Air Force and the Air National Guard assist in air evacuations and will also operate on lands administered by BLM. State police are attempting to reach formal agreements with public and private groups in the SEPA.

5.10 Health Care

Health care facilities in the SEPA are shown in Figure 5.6 and Table 5.22. The only major expansion of health care facilities now being planned would occur in Las Cruces where a new hospital and expansion of Memorial General Hospital have been proposed. In addition to the hospitals given in the table, there are accredited nursing homes in

TABLE 5.22

HEALTH CARE FACILITIES, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Health Care Facilities</u>	<u>Location</u>	<u>Accreditation</u> ^{a,b}	<u>Number of</u> ^c <u>Personnel</u>	<u>Number of</u> ^c <u>Beds</u>	<u>Percent</u> ^c <u>Occupancy</u>
Dona Ana County					
Memorial General Hospital	Las Cruces	A	613	160	71.9
Grant County					
Fort Bayard Medical Center	Bayard	C	264	296	61.0
Hillcrest General Hospital	Silver City	A	159	65	75.4
Hidalgo County					
Hidalgo General Hospital	Lordsburg	B	25	25	28.0
Luna County					
Mimbres General Hospital	Deming	B	55	52	42.3
Otero County					
Gerald Champion Memorial Hospital	Alamogordo	A	182	79	62.4
U.S. Air Force Hospital	Holloman Air Force Base	C	231	25	76.0
U.S. Public Health Service	Mescalero	C	37	55	46.7
Sierra County					
Carrie Tingley Hospital for Crippled Children	Truth or Consequences	A	136	76	34.2
St. Ann's Hospital	Truth or Consequences	B	104	57	70.2
SEPA					
All Hospitals	All	A-C	1,806	890	49.0

Notes: ^a Accreditation code is A - accredited by the Joint Commission of the American Hospital Association and certified by State of New Mexico, B - certified but not accredited, C - not accredited and not certified.

Source: ^b New Mexico Department of Health and Environment, Bureau of Health Planning and Development, List of Hospital Facilities in New Mexico, 1977.

^c American Hospital Association, Guide to the Health Care Industry, 1977.

all six counties, offering from one to 65 beds and local clinics with one to three part-time physicians. Mental health care centers are also open in each county, and afford residents short-term counseling. In general, physicians and psychologists in the SEPA refer patients to hospitals in El Paso for further care. In special instances patients may be referred to facilities in Albuquerque, Denver and elsewhere. Many residents of the SEPA, particularly in Dona Ana, Hidalgo and Luna Counties avail themselves regularly of clinics and hospitals outside the SEPA, either in El Paso or, more commonly, in Mexico. The extent to which inhabitants of southwestern New Mexico visit Mexican dentists is uncertain, but may be significant.

The SEPA is served by three mental health care systems. The Southwest Mental Health Center, headquartered in Las Cruces, provides psychological counseling and medical care to Dona Ana, Sierra, and Socorro Counties. The clinical staff has 50 members and one psychiatrist and one registered nurse. In addition to the main facility, a satellite clinic operates in Truth or Consequences. The Area Human Resources Council serves Grant, Hidalgo, and Luna Counties, with offices in Deming, Lordsburg, and Silver City. The clinical staff includes one psychologist. The Otero County Mental Health Association is located in Alamogordo, and has one psychiatrist and one registered nurse.

Table 5.23 shows health care personnel, by county, for the SEPA. In the six counties of southwestern New Mexico as a whole, there are far fewer physicians than would meet national standards of 1.6 doctors for each thousand of population. Registered nurses likewise fall below accepted standards of 3.9 per thousand, while the number of dentists is insufficient to reach the established ratio of 1.0 for each two thousand residents. Only in the number of licensed practical nurses does the SEPA exceed national standards, with 1.3 per thousand compared to 1.2 per thousand nationally. Certain areas suffer extreme shortages of medical personnel. The Department of Health, Education and Welfare named the Hatch Valley in northern Dona Ana County and the Anthony-La Tuna area in southern Dona Ana County as critical medical and dental manpower shortage areas. Sierra County has been characterized as a dental manpower shortage area. Communities in these areas can apply for physicians and dentists from the National Health Service Corps (NHSC). Two NHSC physicians and one dentist have already been assigned to clinics in Hatch.

Health care in the SEPA is financed largely by patient and medicaid payments. Of major institutions, only Mimbres General Hospital receives regular financial assistance from local governments; this aid was only \$40,000, or 3.3 percent of the hospital budget. State and federal assistance accounted for less than 3 percent of all hospital revenue in the SEPA in 1976. Local government support is significant in undertaking bond issues to cover the costs of hospital

TABLE 5.23

HEALTH CARE PERSONNEL AND HOSPITAL BEDS, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1976

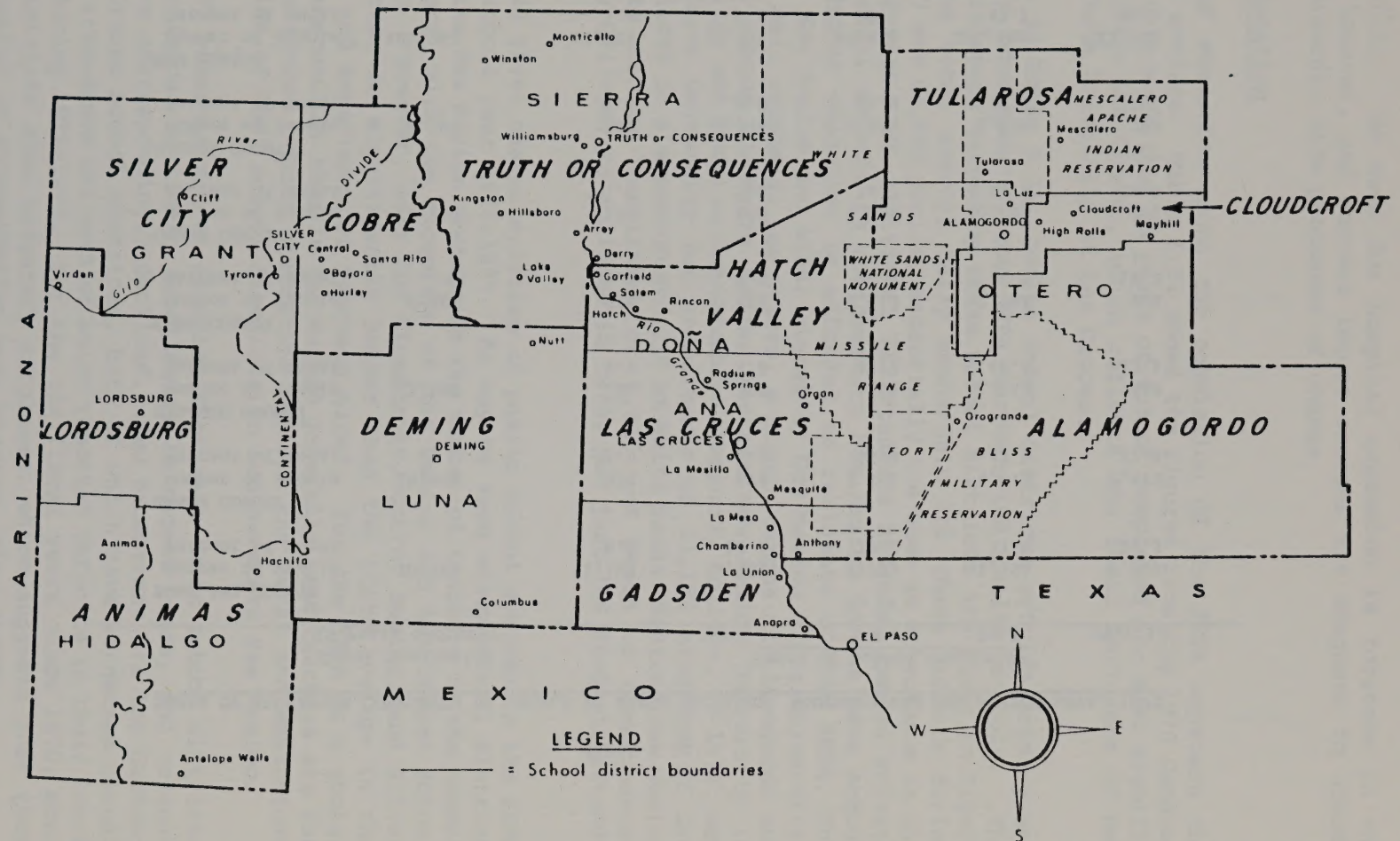
<u>County</u>	<u>Population</u>	<u>Number of Doctors^a</u>	<u>Doctor- Patient Ratio</u>	<u>Number of Dentists^b</u>	<u>Dentist- Patient Ratio</u>	<u>Number of Hospital Beds^c</u>	<u>Hospital Beds- Residents Ratio</u>
Dona Ana	81,900	62	1:1,321	25	1:3,276	160	1:512
Grant	24,000	18	1:1,333	5	1:4,800	361	1:66
Hidalgo	6,000	2	1:3,000	1	1:6,000	25	1:240
Luna	14,600	5	1:2,920	4	1:3,650	52	1:281
Otero	41,600	21	1:1,981	22	1:1,891	119	1:350
Sierra	8,800	12	1:733	1	1:8,800	133	1:66
SEPA	176,900	120	1:1,474	58	1:3,050	850	1:208
New Mexico	1,169,400	1,455	1:803	703	1:1,660	6,671	1:175

Sources: ^a New Mexico Board of Medical Examiners, Official List of Physicians and Surgeons, 1976.

^b Harbridge House, Inc. based on information received from New Mexico Department of Health and Social Services, Comprehensive Planning Division.

^c American Hospital Association, Guide to the Health Care Industry, 1977.

FIGURE 5.7
SCHOOL DISTRICT
SOUTHWESTERN NEW MEXICO SEPA, 1976



Source: Bureau of Business and Research, The University of New Mexico, New Mexico Statistical Abstract, 1977.

TABLE 5.24

YEARS OF EDUCATION COMPLETED BY PEOPLE 25 YEARS OR OLDER, SOUTHWESTERN NEW MEXICO SEPA, 1970

	Total Population 25 years and over	Years of School Completed				
		0	1-4	5-8	9-12	Over 13
DONA ANA COUNTY						
Number of People	30,264	1,198	3,051	5,792	11,354	8,869
Percent of Total		4.0	10.1	19.1	37.5	29.3
GRANT COUNTY						
Number of People	10,845	324	676	2,701	4,672	2,472
Percent of Total		3.0	6.2	24.9	43.1	22.8
HIDALGO COUNTY						
Number of People	2,362	111	108	689	1,144	310
Percent of Total		4.7	4.6	29.2	48.4	13.1
LUNA COUNTY						
Number of People	6,069	214	521	1,612	2,793	929
Percent of Total		3.5	8.6	26.6	46.0	15.3
OTERO COUNTY						
Number of People	18,293	156	560	2,720	10,051	4,806
Percent of Total		.9	3.1	14.9	54.8	26.3
SIERRA COUNTY						
Number of People	4,709	122	376	1,598	1,828	785
Percent of Total		2.6	8.0	33.9	38.8	16.7
NEW MEXICO						
Number of People	489,263	12,263	27,301	91,816	230,539	123,704
Percent of Total		3.3	5.6	18.7	47.1	25.3

Source: U.S. Department of Commerce, Bureau of the Census, Census of the Population, Characteristics of the Population, New Mexico, 1973.

construction. No need for hospital expansion is foreseen in the future, however, and current income sources are adequate to accommodate present, slow processes of change.

5.11 Education

Levels of education among the population of the SEPA approach the national average. Table 5.24 shows the figures from the 1970 Census. Persons with more than 13 years of school completed are most significant in Dona Ana County, which reflects the local influence of New Mexico State University at Las Cruces.

As shown in Table 5.25, twelve school districts provide primary and secondary education in the SEPA through 100 public schools. The geographic areas served by these school districts are shown in Figure 5.7. The total average daily membership for these schools during 1976-1977 was 43,000 pupils, essentially the same as attendance in the preceding year. An additional 712 students attended twelve private and parochial schools in southwestern New Mexico in the same school year. Higher education is afforded to residents of the SEPA, the state of New Mexico and other states by New Mexico State University, with its main campus at Las Cruces, a branch campus at Alamogordo and a branch campus at White Sands; Western New Mexico University in Silver City; and Truth or Consequences Community College. In 1976, New Mexico State University had enrollments of 11,134 students at Las Cruces, 1,009 at Alamogordo and 210 at White Sands. Western New Mexico University had an enrollment of 1,916 and Truth or Consequences Community College, established in 1975, had just 100 students attending.

Table 5.26 gives characteristics of public school systems in the SEPA for the school year 1976-1977. As may be seen every school district betters the New Mexico average in the number of teachers to the number of students, with the exception of the Deming and Las Cruces School Districts. However, only the Cloudcroft, Cobre, Deming, and Silver City systems do significantly better than the state average in the training and experience of teachers hired. For the SEPA as a whole, classes are smaller than in New Mexico generally, and teachers are far less experienced. Both statistics reflect the rural and small-town composition of most school districts in southwestern New Mexico.

Table 5.27 presents school district finances. Most school districts have experienced declining enrollments in recent years, and revenue needs have correspondingly declined. Two exceptions are the Gadsden and Las Cruces School Districts, both of which have witnessed recent gains in attendance and both of which reported deficits in their total budgets during 1976-1977. For the six fiscal years since 1970, most school districts show budgetary surpluses, which suggests that they are successful in accommodating most present, slow change.

TABLE 5.25

PUBLIC AND PRIVATE SCHOOL SYSTEMS, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA, 1976-1977

<u>School System</u>	<u>Area Served</u>	<u>Number of Schools^c</u>	<u>System Capacity^{b,d} (number of students)</u>	<u>Average Attendance^{c,e} (number of students)</u>	<u>Percent Occupancy</u>	<u>Status of System^d</u>
Dona Ana County Gadsden Public	Southern Dona Ana County	9	5,000	4,852	97.0	enrollments increasing
Las Cruces Public	Central Dona Ana County	28	15,500	14,991	96.7	enrollments decreasing
Hatch Valley Public	Northern Dona Ana County	3	1,200	901	75.1	enrollments decreasing
Private	All of County	7	a	336	a	--
Grant County Cobre Public	Eastern Grant County	6	2,700	2,412	89.3	enrollments decreasing
Silver City Public	Western Grant County	8	4,000	3,545	88.6	enrollments steady
Private	All of County	1	a	117	a	--
Hidalgo County Animas Public	Southern Hidalgo County	2	675	571	84.6	enrollments increasing
Lordsburg Public	Northern Hidalgo County	5	2,000	1,149	57.5	enrollments decreasing
Luna County Deming Public	Luna County	10	3,700	3,421	92.5	enrollments steady
Private	All of County	1	a	5	a	--
Otero County Alamogordo Public	Southern Otero County	19	10,000	7,941	79.4	enrollments decreasing
Cloudercroft Public	Sacramento Mtns.	2	450	266	59.1	enrollments increasing
Tularosa Public	Northern Otero County	4	1,600	1,461	91.3	enrollments steady
Private	All of County	3	a	254	a	--
Sierra County Truth or Consequences Public	Sierra County	4	1,700	1,514	89.1	enrollments decreasing
SEPA All Public	All Counties	112	48,525	43,024	88.7	Variable

Note: ^aNo estimates available^bCapacity figures are estimates only.Sources: ^cNew Mexico Department of Education, Annual Statistical Report. 1977.^dInformation obtained by telephone from each school district.^eNew Mexico Department of Finance and Administration, Public School Finance Division, Statistics-Public School Finance. 1977.

TABLE 5.26

EDUCATIONAL PERSONNEL, BY COUNTY, SOUTHWESTERN NEW MEXICO SEPA 1976-1977

<u>County</u>	<u>Number of Teachers^a</u>	<u>Number of Students^a</u>	<u>Teacher- Student Ratio</u>	<u>Teacher Training & Experience Index^b</u>
Dona Ana	990	20,744	1:21.0	1.007
Grant	291	5,947	1:20.4	1.071
Hidalgo	93	1,720	1:18.5	.950
Luna	164	3,421	1:21.8	1.072
Otero	494	9,644	1:19.5	1.035
Sierra	82	1,514	1:20.1	.997
SEPA	2,114	42,990	1:20.3	1.025
New Mexico	13,054	274,920	1:21.1	1.042

Notes: ^a School districts within counties have been aggregated by county; fractions have been rounded to the nearest whole.

^b Index reflects years of education and experience, as calculated by New Mexico Department of Education and Finance, Public School Division.

Source: New Mexico Department of Finance and Administration, Public School Finance Division, Statistics-Public School Finance, 1977.

TABLE 5.27

SOURCES OF REVENUE AND TYPES OF EXPENDITURE, SCHOOL DISTRICTS, SOUTHWESTERN NEW MEXICO SEPA, 1976

Budgetary Component	Alamogordo		Animas		Cloudcroft	
	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total
Sources of Revenue						
Local	546,402	5.9	328,495	40.8	67,283	13.6
State	7,121,776	77.1	472,806	58.7	386,858	78.5
Federal	1,575,987	17.0	3,934	0.5	38,971	7.9
Total	9,244,165	100.0	805,235	100.0	493,112	100.0
Types of Expenditure						
Administration	399,338	4.4	35,148	4.6	33,802	7.4
Health Services	67,036	0.7	8,857	1.2	0	0.0
Instruction	5,891,194	64.4	441,127	58.1	260,477	56.7
Operation & Maintenance	1,093,359	11.9	51,716	6.8	57,336	12.5
Transportation	329,484	3.6	133,075	17.5	36,761	8.0
Capital Spending, Debt						
Service & Fixed Charges	1,072,231	11.7	81,847	10.8	64,931	14.1
Other	305,972	3.3	7,442	1.0	5,723	1.3
Total	9,158,614	100.0	759,212	100.0	459,030	100.0
Budgetary Balance	85,551	0.9	46,023	6.1	34,082	7.4

Budgetary Component	Cobre		Deming		Gadsden	
	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total	Dollar Amount	Percent of Total
Sources of Revenue						
Local	436,495	14.6	517,488	12.2	433,398	8.4
State	2,533,579	84.7	3,726,970	87.6	4,662,488	90.3
Federal	22,780	0.7	8,567	0.2	65,722	1.3
Total	2,992,854	100.0	4,253,025	100.0	5,161,608	100.0
Types of Expenditure						
Administration	120,802	4.1	139,590	3.4	176,403	3.4
Health Services	30,248	1.0	32,237	0.8	59,221	1.1
Instruction	1,908,376	64.2	2,812,581	67.8	3,383,762	64.3
Operation & Maintenance	309,721	10.2	438,789	10.6	424,026	8.1
Transportation	160,067	5.4	221,221	5.3	385,896	7.3
Capital Spending, Debt						
Service and Fixed Charges	412,749	13.9	479,704	11.6	688,585	13.1
Other	30,659	1.2	27,108	0.5	143,387	2.7
Total	2,972,622	100.0	4,151,230	100.0	5,261,280	100.0
Budgetary Balance	20,232	0.7	101,795	2.5	(99,672)	(1.9)

Source: New Mexico Department of Finance and Administration, Public School Division, Statistics - Public School Finances, 1977.

TABLE 5.27 (Cont'd)

SOURCES OF REVENUE AND TYPES OF EXPENDITURE, SCHOOL DISTRICTS, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Budgetary Component</u>	<u>Hatch Valley</u>		<u>Las Cruces</u>		<u>Lordsburg</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
Sources of Revenue						
Local	86,554	7.6	1,282,099	7.7	163,182	11.3
State	1,032,092	90.3	14,462,299	86.5	1,264,844	87.9
Federal	23,459	2.1	969,330	5.8	11,056	0.8
Total	1,142,105	100.0	16,713,728	100.0	1,439,082	100.0
Types of Expenditure						
Administration	53,875	4.8	490,099	2.9	60,248	4.1
Health Services	13,671	1.2	104,318	0.6	10,313	0.7
Instruction	677,625	60.5	11,215,058	66.1	910,256	62.1
Operation & Maintenance	108,685	9.7	1,724,171	10.2	155,099	10.6
Transportation	55,058	4.9	755,916	4.5	76,040	5.2
Capital Spending, Debt						
Service & Fixed Charges	185,845	16.6	2,420,661	14.3	174,843	11.9
Other	25,396	2.3	249,527	1.4	79,935	5.4
Total	1,120,155	100.0	16,959,750	100.0	1,446,734	100.0
Budgetary Balance	21,950	2.0	(246,022)	(1.5)	(27,652)	(1.9)
<u>Budgetary Component</u>	<u>Silver City</u>		<u>Truth or Consequences</u>		<u>Tularosa</u>	
	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>	<u>Dollar Amount</u>	<u>Percent of Total</u>
Sources of Revenue						
Local	816,103	18.8	208,419	10.6	60,006	3.4
State	3,492,625	80.5	1,718,538	87.6	1,248,104	71.5
Federal	31,993	0.7	35,092	1.8	437,413	25.1
Total	4,340,721	100.0	1,962,049	100.0	1,745,523	100.0
Types of Expenditure						
Administration	149,798	3.6	68,225	3.6	88,783	5.0
Health Services	32,770	0.8	12,740	0.7	9,339	0.5
Instruction	2,724,572	66.3	1,211,427	63.3	1,124,033	64.0
Operation & Maintenance	432,486	10.5	158,100	8.2	173,446	9.9
Transportation	263,578	6.4	154,654	8.0	91,859	5.2
Capital Spending, Debt						
Service & Fixed Charges	468,844	11.4	290,211	15.2	229,882	13.1
Other	40,587	1.0	19,342	1.0	41,226	2.3
Total	4,112,635	100.0	1,914,699	100.0	1,758,568	100.0
Budgetary Balance	228,086	5.5	47,350	2.5	(13,045)	(0.7)

Source: New Mexico Department of Finance and Administration, Public School Division, Statistics -- Public School Finances, 1977.

TABLE 5.28

HOUSING UNITS, FOR COUNTIES AND SELECTED COMMUNITIES, SOUTHWESTERN NEW MEXICO SEPA, 1970

<u>County/Community</u>	<u>Conventional Single-Family Homes</u>		<u>Multiple Family Units</u>		<u>Mobile Homes</u>		<u>Total Units</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Dona Ana	15,015	76.2	3,027	15.3	1,674	8.5	19,716	100.0
Las Cruces	8,789	76.6	2,052	17.9	636	5.5	11,477	100.0
Grant	5,693	82.0	620	8.9	629	9.1	6,942 ^a	100.0
Silver City	1,936	75.8	287	11.2	175	7.0	2,555	100.0
Hidalgo	1,268	83.1	88	5.8	169	11.1	1,525	100.0
Lordsburg	889	82.0	76	7.0	119	11.0	1,084	100.0
Luna	3,148	80.5	380	9.7	381	9.8	3,909	100.0
Deming	2,262	82.9	312	11.4	156	5.7	2,730	100.0
Otero	9,032	74.8	1,515	12.5	1,530	12.7	12,077	100.0
Alamogordo	5,684	78.4	696	9.6	872	12.0	7,252	100.0
Sierra	2,495	66.7	734	19.6	510	13.7	3,739	100.0
Truth or Consequences	1,554	59.8	682	26.2	363	14.0	2,599	100.0
SEPA	36,651	76.5	6,364	13.3	4,893	10.2	47,908	100.0
State of New Mexico	263,381	81.8	42,074	13.1	16,443	5.1	321,898	100.0

Note: ^a Revised 1970 housing unit count for Silver City listed in New Mexico Housing census as 2,810.

Source: U.S. Department of Commerce, Bureau of the Census, 1970 Census of Housing, New Mexico, 1972.

5.12 Housing Units

Conventional, single family homes predominate in southwestern New Mexico, with multiple family units and mobile homes representing approximately one-fourth of the housing stock. Table 5.28 presents housing units by type for the SEPA, as reported in the 1970 Census. Mobile homes are an important form of housing unit in the region with over one unit in 10 being a mobile unit. This figure is approximately double the relative number of such homes in the state. In Hidalgo County, the count of occupied mobile homes increased by 128 percent between 1960 and 1970; in Sierra County, the increase was 309 percent. Multiple family units comprise approximately 13 percent of all dwellings in the SEPA. Such units are more common in the community of Truth or Consequences in Sierra County, constituting an estimated 26.2 percent of the local housing stock here. However, residential density ranges in both urban and rural areas are comparatively low throughout the SEPA.

Housing conditions in the SEPA compare favorably with statistics for the state. Table 5.29 indicates census data concerning overcrowding and plumbing facilities as a measure of housing deficiency. In the region, only Sierra County exceeded the state average for units lacking some or all plumbing facilities. Overcrowding of dwelling units, defined as more than 1.0 persons per room, serves as an indication of housing availability as well as a condition standard. Overcrowding was generally found to be lower than state averages, although approximately one of five households in Lordsburg and Hidalgo County were defined as such. However, total substandard units in the six-county area numbered about one-half that of state proportions in 1970.

Although it is estimated that the total number of substandard and dilapidated dwelling units is declining in the area certain continuing problems may be identified with housing in southwestern New Mexico. Among these are included rising construction costs and expenses of building sites. Table 5.30 lists house values and construction costs for selected communities in the SEPA. With the addition of generally rising mortgage and rental rates, the availability of detached single family dwellings has become associated with higher incomes. The expansion of mobile home occupancy in the SEPA, reflecting the lower costs of these units, is a response to the limited supply of conventional housing.

5.13 Social Services and Welfare

The state of New Mexico distributed nearly \$18.6 million in financial, medical, and food stamp assistance to residents of the SEPA in 1976. Approximately 10 percent of the total population of the six counties in the SEPA received some form of assistance from the state during the

TABLE 5.29

HOUSING CONDITIONS FOR COUNTIES AND SELECTED COMMUNITIES, SOUTHWESTERN NEW MEXICO SEPA, 1970

<u>County/Community</u>	<u>Units Lacking Some or All Plumbing Facilities</u>		<u>Units With More Than One Person per Room</u>		<u>Substandard Units^a</u>		<u>Total Units Occupied</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Dona Ana	1,428	7.7	3,012	16.3	516	2.8	18,524	100.0
Las Cruces	347	3.2	1,382	12.7	83	0.8	10,909	100.0
Grant	626	10.0	953	15.3	213	3.4	6,242	100.0
Silver City	170	7.3	346	14.9	54	2.3	2322	100.0
Hidalgo	81	6.0	284	21.0	23	1.7	1,350	100.0
Lordsburg	43	4.4	206	21.2	9	0.9	974	100.0
Luna	285	8.1	587	16.6	78	2.2	3536	100.0
Deming	202	8.0	244	9.7	48	1.9	2518	100.0
Otero	350	3.2	1324	12.1	83	0.8	10,934	100.0
Alamogordo	107	1.6	637	9.4	13	0.2	6,752	100.0
Sierra	444	15.3	315	10.9	36	1.2	2,898	100.0
Truth or Consequences	243	11.9	164	8.1	39	1.9	2,036	100.0
SEPA	3,214	7.4	6,160	14.2	949	2.2	43,484	100.0
State of New Mexico	34,226	11.8	45,111	15.6	12,474	4.3	289,389	100.0

Note: ^a Substandard units are defined as those with more than one person per room, in a dwelling lacking some or all plumbing.

Source: U.S. Department of Commerce, Bureau of the Census, 1970 Census of Housing, New Mexico, 1972.

TABLE 5.30

CONSTRUCTION COSTS AND HOUSING VALUES, FOR SELECTED COMMUNITIES,
SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Community</u>	<u>County</u>	<u>Average Price of Building Lot</u>	<u>Construction Cost (sq. ft.)</u>	<u>Average Selling Price of Single Family Dwelling</u>
Alamogordo ^{a,b}	Otero	\$ 4,000	\$ 20.75	\$ 25,845
Deming ^d	Luna	3,930	20.50	26,970
Las Cruces ^a	Dona Ana	4,495	20.20	20,225
Lordsburg ^a	Hidalgo	2,810	20.20	18,370
Silver City ^a	Grant	3,370	18.00	19,100
Tularosa ^b	Otero	\$ 1,500	\$ 25.00	\$ 10,000

Sources: ^a Harbridge House, Inc., index from data base in New Mexico Department of Development, Community Profiles, 1974.

^b Southeastern New Mexico Economic Development District, A Statistical Fact Book, January, 1976.

TABLE 5.31

FINANCIAL, MEDICAL AND FOOD STAMP ASSISTANCE PAYMENTS, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>Assistance Program</u>	<u>Dona Ana</u>	<u>Grant</u>	<u>Hidalgo</u>	<u>Luna</u>	<u>Otero</u>	<u>Sierra</u>	<u>SEPA</u>	<u>New Mexico</u>
Financial Assistance								
AFDC Dependent ^a	\$1,679,262	\$656,611	\$171,406	\$369,661	\$ 656,095	\$144,904	\$3,677,939	\$32,181,357
AFCD Foster Care	37,857	2,435	178	0	4,551	2,069	47,090	183,230
General	10,558	3,634	2,194	2,546	3,058	8,820	30,810	337,290
Total Financial	1,727,677	662,680	173,778	372,207	663,704	155,793	3,755,839	32,701,877
Medical Assistance								
Aged, Blind, Disabled	821,075	476,178	208,792	116,771	237,277	173,255	2,033,348	15,748,134
AFCD Dependent	708,624	229,235	50,730	76,258	256,527	81,139	1,402,513	13,561,738
Post AFDC	16,881	3,102	0	1,084	12,022	4,728	37,817	327,454
AFDC Foster Care	5,672	0	0	0	1,047	0	6,719	32,353
Children in "CWS"								
Foster Care	7,432	2,669	217	1,093	3,042	4,864	18,417	230,496
Categorical Needy	334,599	541,885	257,692	25,540	6,286	97,114	1,263,116	5,879,221
Total Medical	1,894,283	1,253,069	517,431	220,746	516,201	361,100	4,762,830	9,525,660
Food Stamp Assistance								
Purchase Stamps	1,728,773	399,176	96,592	267,549	534,020	195,011	3,221,121	20,590,443
Free Stamps	3,920,935	879,819	218,474	525,319	1,010,393	273,214	6,828,154	45,599,179
Total Food Stamps	5,649,708	1,278,995	315,066	792,868	1,544,413	468,225	10,049,275	66,189,622
Total All Assistance	\$9,271,668	\$3,194,744	\$1,006,275	\$1,385,821	\$2,724,318	\$985,118	\$18,567,944	\$108,417,159

Note: ^a AFDC -- aid to families with dependent children.

Source: New Mexico Health and Social Services Department, State Welfare Agency, Annual Statistical Report, Fiscal Year 1975-76.

TABLE 5.32

NUMBER OF RECIPIENTS OF FINANCIAL, MEDICAL AND FOOD STAMP ASSISTANCE, SOUTHWESTERN NEW MEXICO SEPA, 1976

<u>County</u>	<u>Financial Assistance</u>		<u>Medical Assistance</u>		<u>Food Stamps</u>	
	<u>1976 Population</u>	<u>Number of Recipients</u>	<u>Percent of Population</u>	<u>Number of Recipients</u>	<u>Percent of Population</u>	<u>Percent of Population</u>
Dona Ana	81,900	3,247	3.9	1,950	2.3	11,851
Grant	24,000	1,230	5.1	685	2.8	2,662
Hidalgo	6,000	340	5.6	193	3.2	678
Luna	14,600	709	4.9	428	2.9	1,735
Otero	41,600	1,297	3.1	710	1.7	3,312
Sierra	8,800	288	3.2	257	2.9	978
SEPA	176,900	7,111	4.0	4,223	2.4	21,216
New Mexico	1,168,400	60,504	5.2	33,490	2.9	234,109

Source: New Mexico Department of Health and Social Services, Annual Statistical Report, 1976; and information supplied by the New Mexico Department of Health and Social Services.

1976 fiscal year. Table 5.31 outlines the types of assistance given, by county. Table 5.32 indicates the extent of assistance in terms of the number of recipients, by type of assistance received, and their percentage in each county's population.

5.14 Infrastructure Adaptability

County and Local governments in the SEPA appear generally able to cope with existing and projected demands on components of community infrastructure. Rates of population growth in southwestern New Mexico have been relatively consistent over recent years and have enabled authorities to anticipate and accommodate developing needs. While facilities have had to be expanded and services have had to be broadened, public revenues have kept pace with spending requirements. Not only have property taxes risen with new construction, but gross receipts taxes have grown with accelerated wholesale and retail sales, and other sources of government income have likewise increased. As the preceding subsections suggest, the SEPA is presently able to adjust to a gradual rate of growth and change, one which is tied to the 2 percent average annual increase in the population of the six-county area recorded since 1970. However, any proposed or actual development which significantly added to this rate of growth and change, either in the SEPA generally, or in one particular part of southwestern New Mexico, would be likely to strain one or more components of community infrastructure, and adversely affect the quality of life.

6.0 PROBLEMS, TRENDS AND ISSUES

As previously discussed, public lands in the SEPA are perceived to represent a basic resource on which a range of economic activities, public services, recreational activities and community life-styles depend. The extent of public interest in the actions of the Bureau of Land Management reflects the relative importance of its role in a region nearly half of which is under BLM administration. The concern of interest groups and interested individuals is greatest, however, in a few problem areas. Each of these has been mentioned earlier; it remains to summarize them in terms of the issues they raise.

6.1 Lands

The survey needs existing in most parts of the SEPA do not appear pressing, with the exception of areas adjacent to communities or locations of recent urban or industrial development (Anapra, Playas). In a few places, instances of trespass occupancy are suspected. These instances do not appear to constitute a pattern of trespass such as occurs in other parts of New Mexico. If high resource values are identified for tracts on which unauthorized occupancy is taking place, removal of all improvements may be necessary in order to provide for the highest and best use of those public lands. Otherwise, recommendations may be made to authorize existing uses by lease or disposal.

In Grant and Hidalgo Counties, identification of trespass occupancy must proceed together with examination of direct and indirect effects of development in the vicinity of the Playas smelter. Growth in this area is occurring outside any existing urban or industrial framework, with needs for careful coordination of corporate, county, and federal planning efforts. In Dona Ana County, identification of trespass occupancy must proceed in tandem with planning for urban land needs, not only in the vicinity of Las Cruces, but also in the Anapra-Anthony area along the border with El Paso County, Texas.

In all parts of the SEPA, but especially in Dona Ana County where population pressures have been greatest, public lands will play an important role in the expansion and improvement of key components of community infrastructure. Roads in the SEPA will need to be rebuilt or replaced; proposals for conversion of U.S. Highway 80 into a median-divided, limited-access route comparable to Interstates 10 and 25 are only the most dramatic of many transportation plans. Likewise, electric, natural gas, petroleum, and telephone utilities will need to add to their facilities in the SEPA, principally replacing or upgrading equipment in existing transmission corridors. Municipal and county governments will need to obtain additional sites for water, wastewater treatment, and solid waste disposal facilities.

All of these aspects of community infrastructure will place demands on public lands in southwestern New Mexico and inevitably involve the BLM in planning decisions at the local and regional level. As outlined in the discussion of attitudes, public opinion of government's role in such decision-making is both heated and divided. Many actions will have the potential to influence the growth-no growth-what kind of growth debate significantly. As population pressures intensify, BLM can expect to be involved in more controversies which arise out of apparently minor questions (Dona Ana landfill) but involve greater issues (pattern and type of growth in Dona Ana County).

Consequently, BLM cannot avoid becoming involved in short- and long-range planning in the SEPA. While letting municipal and county governments take the lead on matters which are principally theirs to decide, BLM should seek to anticipate and evaluate community needs. Cooperative agreements with local authorities represent a foundation on which a framework of coordinated planning could be built.

6.2 Minerals

No development of leasable minerals in the SEPA is presently projected. Few areas have locatable minerals which would affect public land management. However, salable minerals will continue to represent the bulk of mining on lands administered by BLM. The demand for these materials is expected to increase with continuing urbanization and infrastructural expansion. Particularly significant impacts from the proposals for U.S. Highway 80 would appear likely.

6.3 Forest Products

Forestry does not represent a significant activity on public lands in the SEPA. With planned reductions in sawlog production on the Mes-calero Apache Indian Reservation, forest products will decline in importance to the regional economy.

6.4 Range

Livestock grazing is a basic industry in most parts of southwestern New Mexico, albeit an industry declining in relative importance as other sectors grow. Ranching represents the traditional source of employment and income in the SEPA, except in mining communities of Grant County, and in irrigation districts along the Rio Grande and elsewhere. Public lands have made a major contribution to cattle and sheep production in the SEPA since the region was settled, and many present-day management practices reflect the experience of one hundred years of livestock grazing on the open range. Other ranchers consider public lands to be their property, if not by law then by tradition of use. This history of operating on public lands presents significant problems in range management, since changes are often regarded by ranchers as being arbitrary and illegitimate.

Anger among ranch operators over Allotment Management Plans (AMP's), terms of permits, and grazing fees are only symptomatic of a more serious condition. For a century, public lands have been perceived to support the development of livestock production. With multiple use management in the 1970's, BLM policies are perceived to threaten the continued existence of ranching in its present form. For ranchers, this threat is personal and immediate rather than general and economic. It not only appears to them that their livelihood is endangered but that their life-style is being challenged. Big government is horning in on the last frontier and forcing operators either to rationalize their business along new lines or to liquidate. The key informant interviews detailed in Section 2.0 revealed considerable pessimism and bitterness among the grazing permittees questioned.

Given the traditional importance of ranching to the SEPA, and the socioeconomic significance ranching still has for many parts of the region, BLM cannot avoid being drawn into a heated debate over the relationship of its actions to livestock production.

6.5 Recreation

With population growth in the SEPA, recreational demands on public lands in the SEPA will grow. Intense pressures will be greatest in proximity to urbanizing areas, such as in the Organ Mountains east of Las Cruces. A popular activity is off-road vehicle use, with off-road driving occurring even in relatively remote portions of southwestern New Mexico. The popularity of ORV use will require careful planning, both to provide sufficient scope for drivers of these vehicles and to provide adequate protection for natural areas and other recreational activities. Increasing demands for other forms of recreation will make competing and often incompatible uses of public lands.

6.6 Special Problems

The SEPA is characterized by a relative diversity of distinct communities, each of which has particular concerns and special problems. While most parts of the six-county area are confronted with issues of growth and change, a few must cope with issues of decline or stagnation. Communities like those of the Hatch Valley and eastern Otero County possess a limited economic base in farming and ranching. Therefore, in these areas, public lands are of greater significance than in parts of the SEPA where a more diversified economy exists and consequently dependence on resources administered by the Bureau of Land Management is less pronounced. In the vicinity of Las Cruces and other urbanizing communities, local concerns with public lands chiefly regard their use for infrastructural systems and recreational activities. In still other places in the SEPA, such as retirement havens in Grant and Sierra Counties, preservation of the desert environment is a pressing problem, as retirees and other residents seek to maintain the existing values of clean air, open space, and natural beauty which attracted them to the region.

In the several parts of southwestern New Mexico, the Bureau of Land Management possesses many specific constituencies. As noted in Section 2.2, these groups are as numerous as the issues which arise respecting public lands. The following section addresses some of the formal and informal relationships which exist between the Bureau and interested groups and individuals in the SEPA.

7.0 BUREAU RELATIONSHIPS

A thorough study was made of the District Office and State Office files. Interviews were conducted with personnel of both locations to insure that no relationships with planning and land use control groups, or other interested groups or individuals were overlooked. A complete index of data sources to record the cooperative agreements, memos of understanding and other formal arrangements is contained in Table 7.1. Included are agreements made at the state and national level which apply to the Las Cruces District. An identification and analysis has been made of the most critical relationships. The identification of the organization and key people involved is shown in column 2 of Tables 7.2 and 7.3. Table 7.2 outlines the existing formal, written agreements and Table 7.3 details relationships that are not formalized by any written document, yet are understood to exist between various individuals and the Las Cruces District.

The laws, regulations and policies of the state of New Mexico have various effects on the public land management. Appendix D has a complete listing of the non-federal laws, broken down by activity. In addition, because those public lands managed by BLM make up a very large percentage of all levels in the SEPA, local planning and land use control groups play an important part in the Las Cruces District. County governments, many in association with regional Councils of Governments, have the responsibility of planning and zoning for all lands within the county. The Bureau land use planning process is required to be coordinated with other Federal and State or local planning efforts. Bureau employees are instructed to work with the local planning boards and commissioners. Thus the planning processes of local government affect Bureau disposal programs, classifications, construction programs and road developments.

Many of the official planning and land use control groups affect the BLM through written agreements and understandings, referred to in earlier paragraphs. The desire for a coordinated and integrated plan is the basis for many agreements BLM enters into. Extensive involvement also exists with state agencies such as N.M. Highway Department, Bureau of Outdoor Recreation, and New Mexico State Engineer. In addition, one of the most influential non-government organizations is the National Resource Defense Council (NRDC). NRDC will have greater influence in range management programs than any other organization outside the Bureau as a result of court rulings in favor of an NRDC lawsuit requiring grazing Environmental Impact Statements for all national resource lands used for livestock grazing. Until these Environmental Statements have been completed, no range improvement projects can be implemented, if a change in the livestock grazing pattern is proposed.

TABLE 7.1
INVENTORY OF RELATIONSHIPS

<u>AGENCY</u>	<u>NUMBER</u>	<u>AGREEMENT DATE</u>	<u>SUBJECT OF AGREEMENT</u>
Housing and Urban Development	WO-80	11/15/76	Implementation of HUD 701 assisted land use elements.
U.S. Civil Service Commission	WO-96	03/24/77	General agreement with respect to the appointment of consultants & experts.
Energy Research & Development Administration	WO-79	09/15/76	Establishment of program coordination & implementation.
Federal Power Commission	WO-74	06/23/76	Midland Pipeline System (SOHIO) EIS.
	WO-12	07/20/66	Power withdrawals & Right-of-way permits.
National Park Service	NMSO-93		To utilize services of NPS Aircraft & pilots in carrying out its designated functions.
	WO-1	02/20/40	Grazing in National Parks.
	WO-33	07/13/72	Designation of National Land Marks.
Bureau of Reclamation	NMSO-25	04/29/41	Memorandum of understanding Rio Grande projects-NM-Texas Administration of withdrawn or acquired lands by purchase or condemnation.
		05/06/49	Supplement No. 1
		07/17/64	Supplement No. 2
		10/05/42	Supplement Agreement
		09/18/52	Transfer of funds.
	WO-28	10/24/52	Administration of grazing privileges.
		08/12/71	Geothermal applications.
		03/02/72	Coordination of Programs.
	WO-31	08/28/72	Administration of Natural Resources.

TABLE 7.1 (Cont'd)

<u>AGENCY</u>	<u>NUMBER</u>	<u>AGREEMENT DATE</u>	<u>SUBJECT OF AGREEMENT</u>
(Cont., Bureau of Reclamation)	WO-51	05/07/74	Coal leasing sites.
	WO-53	07/28/75	Colorado River water quality.
	WO-67	03/18/76	Non-emergency critical habitat determination (also includes F & WS)
Forest Service	WO-16	02/21/63	Fire Suppression Costs.
	WO-9	07/16/63	Mining application & Claims
	WO-20	11/08/66	Matters relating to range management.
	WO-22	07/24/67	Land withdrawals & Forest roads.
	WO-25	07/24/69	Road Maintenance & Construction.
	NMSO-65	05/28/70	Memo of understanding: Joint use of lookout tower and facilities at Sacramento lookout.
	NMSO-22	07/08/71	Memo of understanding: Reimbursement to BLM by FS in services rendered in connection with land exchange cases.
		1971	Hazardous tree program.
	NMSO-62	12/09/71	Memo of understanding: Jack's Peak radio communication equipment.
		02/18/75	Addendum No. 2
	WO-34	07/20/72	Joint Operation of BIFC (also includes NWS).
	WO-35	09/27/72	Integrated timber sales contract.
	WO-44	01/15/75	Resource Management plans (also includes SCS).

TABLE 7.1 (Cont'd)

<u>AGENCY</u>	<u>NUMBER</u>	<u>AGREEMENT DATE</u>	<u>SUBJECT OF AGREEMENT</u>
(Cont., Forest Service)	WO-47	06/24/75	Land & boundary survey activities
	NMSO-20 (WO-35)	10/03/75	General project agreement.
	NMSO-37	01/30/76	Conservation & rehabilitation of wildlife & wildlife habitat (also includes NMDG & F).
		05/12/76	Supplement.
	WO-81	11/11/76	Correlating respective responsibilities for Public lands.
	WO-82	11/01/76	Integrated fire use & control into Resource Management.
	NMSO-79	12/22/76	Resource Management & Conservation program (also includes SCS).
	NMSO-92	03/28/78	Operation of Three Rivers campground.
	NMSO-88	04/04/78	To obtain stream gaging information on water resources of the Red River to assist in planning and administration of the Rio Grande wild & science river.
	NMSO-91	05/01/78	Interagency Agreement to provide for joint air tanker fire protection operation between BLM-USFS at Grant county airport, NM.
	NMSO-95	06/06/78	Cooperation in developing & revising land use analysis and land use plans.
Fish & Wildlife Service	NM-030-09	06/13/72	Predator Management (also includes NMDG & F).

TABLE 7.1 (Cont'd)

<u>AGENCY</u>	<u>NUMBER</u>	<u>AGREEMENT DATE</u>	<u>SUBJECT OF AGREEMENT</u>
(Cont., Fish & Wildlife Ser.)		06/07/74	Development of Fish & Wildlife on McGregor Range (also includes DOD & NMDG & F)
	WO-58	01/23/75	Wildlife & their habitat.
	WO-59	09/25/75	Endangered Species sub-committees.
	WO-60	10/06/75	Energy & Mineral development.
	WO-61	10/07/75	Wildlife Management.
	WO-62	10/30/75	Program & budget development.
	WO-72	06/07/76	Geothermal Program.
	NMSO-87	02/01/78	Interagency animal damage control guidelines in NM.
	WO-103	06/06/78	Related to classification & inventories of natural resources. (also includes Forest Service & Soil Conservation Service).
Soil Conservation Service		04/10/64 11/10/64	Joint assistance by land-owners & operators on private & federal lands.
	NM-03-10	12/03/76	Preservation of study site-geomorphology project area.
Soil Conservation Districts:			
Caballo		02/24/66	Soil conservation and development of natural resources
	NM-030-8	04/05/67	" " " "
		03/02/66	" " " "
		12/07/72	" " " "
Sierra	NM-030-7	03/21/66	" " " "

TABLE 7.1 (Cont'd)

<u>AGENCY</u>	<u>NUMBER</u>	<u>AGREEMENT DATE</u>	<u>SUBJECT OF AGREEMENT</u>
Soil Conservation Districts Cont'd:			
Animas Valley	NM-030-5	02/01/66	Soil Conservation and development of natural resources.
Claunuch Pinto	NM-030-2	02/12/45	" " " "
Deming	NM-030-6	02/01/66	" " " "
Grant	NM-030-3	10/31/60	" " " "
		02/03/69	" " " "
		10/26/70	" " " "
Virden Valley	NM-030-1	06/06/44	" " " "
Penasco	NM-030-4	09/06/62	" " " "
Federal Supply Service	WO-63	03/26/70	Fire Control Program Coordination.
Department of the Army	WO-19	03/18/66	McGregor Range Grazing Administration.
	WO-66	07/13/67	Dredging Filling & excavation in navigable waters
	WO-38	02/02/73	Planning for Corps of Engineers project
	NMSO-16	02/16/73	Memo of understanding: Safety area WSMR AEROBEE 350; ATHENA-H; ABRES-4 projects.
	WO-54	09/25/73	Federal water programs and Section 208 area-wide programs (also includes USDA & EPA)
	NMSO-30 (WO-19)	07/22/76	Co-use grazing McGregor Range. Proposed agreed upon changes to the 6/7/74 memo of understanding.
	NM-030-12	06/03/77	Cooperative fencing agreement.

TABLE 7.1 (Cont'd)

<u>AGENCY</u>	<u>NUMBER</u>	<u>AGREEMENT DATE</u>	<u>SUBJECT OF AGREEMENT</u>
Dept. of the Army Cont'd	NMSO-17	07/24/75	Construction & Maintenance of boundary fence: White Sands Missile Range
	NMSO-100	07/31/78	Preservation of study sites on McGregor Range (Ft. Bliss). Also included New Mexico State University.
U.S. Dept. of Agriculture	WO-2	04/07/42	Soil & Moisture Conservation.
	WO-3	01/28/43	Fire Control.
	WO-8	08/20/56	Pest Control.
	WO-13	12/06/61	Forest insect & disease survey.
	WO-18	07/22/65	Fire control coordination.
	WO-24	05/23/69	National trails system
	WO-32	05/25/72	NAB on wild & free-roaming horses.
	WO-69	03/18/76	National wildfire coordination group.

TABLE 7.1 (Cont'd)

<u>AGENCY</u>	<u>NUMBER</u>	<u>AGREEMENT DATE</u>	<u>SUBJECT OF AGREEMENT</u>
Small Business Administration	WO-11	03/10/59	Forest & related forest products sales to small business.
	WO-14	05/18/62	Timber sales & loans
Bureau of Public Roads	WO-17	05/13/63	Transportation plan.
U.D.G.S.	NMSO-24	02/15/66	Field agreement: Operating procedures in oil & gas well conversion to water wells.
	WO-40	09/26/74	Program & budget coordination.
	WO-52	09/30/74	Joint annual work plan.
	WO-50	03/27/75	Scientist & engineer exchange program.
	WO-46	06/04/75	Drilling operations.
	WO-49	07/09/75	Intermediate scale base mapping.
	WO-55	08/06/75	Cooperation on preparation of environmental analysis and DIS.
	WO-56	08/29/75	Onshore oil, gas & Geothermal resources.
	WO-71	06/02/76	Cartographic & Cadastral information management.
	WO-77	11/24/76	Onshore mineral leasing operations.
Farmers Home Administration	WO-43	12/16/74	Financial assistance to entrymen on Public land.
Department of Defense	WO-48	06/26/75	Fire Emergency assistance (also includes USDA)
U.S. Army Air Defense (Ft. Bliss, McGregor Range)		1974	To conserve & develop Fish & Wildlife resources.

TABLE 7.1 (Cont'd)

<u>AGENCY</u>	<u>NUMBER</u>	<u>AGREEMENT DATE</u>	<u>SUBJECT OF AGREEMENT</u>
Environment Protection Agency	WO-54	09/25/73	Federal water programs and section 208 Area Wide coordination (also includes USDA & Dept. of the Army).
	WO-65	01/05/76	Water pollution control.
Army Corps. of Engineers	NM-030-13	03/10/78	NASA Safety Buffer Zone.
Other BLM Districts:			
Safford	NMSO-1	01/26/71	Administration of Public lands on district boundary.
Science & Education Administration (Jornada Experimental Range)	NMSO-94	04/25/78	Interagency agreement: Research perennial grass for age production soil association, precipitation & stocking rates on arid rangelands; and grazing management plans which will protect productive potential of arid rangeland.
	NMSO-99	07/19/78	To obtain phenology adjustment factor research on the Jornada Experimental Range.
Project Engineer (San Carlos Project)	NMSO-31	02/28/42	Memo of Agreement for the Administration of grazing on lands withdrawn under executive order NO. 5889.
N.M. Parks & Recreation Commission	NMSO-34	07/27/76	Joint Powers Agreement Identification & resolution of mutual planning needs & problems in planning & development of state parks.
N.M. Highway Department	NMSO-53 (WO-17)	07/01/65	Regarding highway construction through public domain.
	NMSO-21	08/20/73	Memo of Agreement: For development & processing of data concerning the economic, social & environment effects of Highway program projects.

TABLE 7.1 (Cont'd)

<u>AGENCY</u>	<u>NUMBER</u>	<u>AGREEMENT DATE</u>	<u>SUBJECT OF AGREEMENT</u>
State Planning Office	NMSO-15	03/14/77	Notification to state & local government through clearing houses.
Office of Aircraft Services	WO-45	06/03/75	Support & service exchange.
Governor of New Mexico	NMSO-76	06/17/76	Coordinate energy program & on the ground resource development.
	NMSO-75	06/22/76	Search & Rescue.
N.M. Dept. of Game & Fish	NMSO-41	09/28/67	Maintain, improve and manage wildlife resources.
		1969	Florida Mountain area.
	NMSO-47	10/06/70	Release of Persian (Iranian) IBEX in Florida Mountains.
	NM-030-9	06/13/72	Predator Management.
	NMSO-46	07/24/72	To coordinate BLM vegetation control project with NMDG&F.
	NMSO-36	11/17/72	Cooperative plan agreement: For conservation & development of fish & wildlife resources on the Ft. Bliss military reserve in the state of N.M. (also includes Army & BSF&WL).
		1974	Release of Persian (Iranian) IBEX in Florida Mountains.
		07/22/76	Proposal agreed upon changes to cooperative agreement.
State of N.M.	NMSO-69	05/07/68	Fire responsibility (includes 7 agencies from state & 5 agencies of USDA & USDI).
	NMSO-90		Joint Powers agreement: To provide for mutual fire assistance
	NMSO-15	03/14/77	Notification to State & local Government through clearing-house.

TABLE 7.1 (Cont'd)

<u>AGENCY</u>	<u>NUMBER</u>	<u>AGREEMENT DATE</u>	<u>SUBJECT OF AGREEMENT</u>
State of N.M. Cont'd	NMSO-80	05/01/77	Cooperative agreement: Surface coal mine reclama- tion.
NMSU	NMSO-96	06/29/78	Coordination of Cultural resource program.
	NMSO-3	01/16/75	Cooperative Education Agreement.
	NMSO-5	06/06/69	College Work Study Program.
	NMSO-11		Cooperative Agreement: Youth Conservation Corps.
	NMSO-19	01/17/73	Cooperative Use & Research "A" Mountain nature area field laboratory.
	NMSO-32	07/01/74	Research Study Contract: Phenological development & carbohydrate budjet of range plants with respect to defol- iation & rest.
	NM-030-11	03/07/77	Proceedures for management of the leasable minerals.

TABLE 7.2
IDENTIFICATION AND ANALYSIS OF CRITICAL FORMAL RELATIONSHIPS

Structure of the relationship. (Boundries, key people, organization)	Purpose of the relationship, subject of agreement, and agreement number	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
Any public lands Director - BLM and Director - National Park Service National Park Service and BLM -----	Formal cooperation Natural Landmarks agreement WO -33 -----	Park Service does theme study, recommends inclusion in Federal Register and notifies BLM. State Director will protect important natural features of each site designated. -----	BLM reports any geological or ecological sites considered as potential natural landmarks. If BLM makes the onsite evaluation, funds are on cost reimbursable basis & NPS gives guidelines. BLM provides available information -----	None over present conditions. Continue with meetings. -----	Conclusions of study are available for BLM use. Plan for protection of designated natural landmark sites. -----
Public lands Commissioner - Bureau of Reclamation Director - Grazing Service. Bureau of Reclamation & Grazing Service.	Formal Cooperation Range administration of lands withdrawn for reclamation purposes. HMSO-25	Lands withdrawn for reclamation purposes will be administered by BLM.	BLM will administer lands withdrawn for reclamation purposes in accordance with the regulations used to administer public lands under the Federal Range Code, charging the same grazing fees as on other public lands.	Has 3 supplemental agreements and can become confusing. Original and supplemental are more than 10 years old and may need revision	Program size is large. Indicates restricted use.

TABLE 7.2 (Cont'd)

Structure of the relationship. (Boundries, key people, organization)	Purpose of the relationship, subject of agreement, and agreement number	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
<p>All lands administered by the BLM & Bureau of Reclamation</p> <p>Director - Fish & Wildlife Service -</p> <p>Director - BLM</p> <p>Commissioner - Bureau of Reclamation</p> <p>F & WS, BR, & BLM</p> <p>-----</p>	<p>Formal cooperation nonemergency critical habitat determination</p> <p>WO-67</p> <p>-----</p>	<p>The proposed critical habitat designation.</p> <p>-----</p>	<p>BLM gives information, assistance, and makes recommendations to F&WS. F&WS will notify BLM of proposed critical habitat designation.</p> <p>-----</p>	<p>None</p> <p>-----</p>	<p>Coordinate with other agencies. Important for designation of critical habitat.</p> <p>-----</p>
<p>Public and State Land</p> <p>Regional Forester - Forest Service</p> <p>State Director - BLM</p> <p>Director - New Mexico Game and Fish Department</p> <p>FS, BLM, & NMG&F</p>	<p>Formal Cooperation</p> <p>Conservation and rehabilitation of wildlife and wildlife habitat</p> <p>NMSO-37</p>	<p>The conservation and rehabilitation of wildlife and wildlife habitat</p>	<p>Develop plans for conservation and rehabilitation of wildlife and wildlife habitat. Cooperation with the Forest Service and New Mexico Game and Fish. At least one annual meeting. Seek future appropriations under provisions of the Sikes Act to implement specific projects of the approved plan.</p>	<p>Relations are adequate.</p>	<p>Keep other agencies in mind when planning. Information about financing and appropriations included.</p>

TABLE 7.2 (Cont'd)

Structure of the relationship. (Boundries, key people, organization)	Purpose of the relationship, subject of agreement, and agreement number	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
On lands of mutual concern. State Conservationist - Soil Conservation Service Regional Forester - Forest Service State Director, - BLM SCS, FS, BLM	Formal cooperation NMSO-79 Resource Management and Soil Conservation	To foster the development and coordination of sound resource management and conservation programs.	Annual meetings involving Area Managers, District Managers, and State Directors are stipulated. Areas of mutual interest and responsibility will be coordinated. Program areas are listed and further explained in agreement.	None	Keep FS and SCS programs coordinated with BLM programs.
-----	-----	-----	-----	-----	-----
State of New Mexico Regional Forester - Forest Service State Director - BLM FS & BLM	Formal cooperation agreement on developing and revising land use analysis & land use plans. NMSO-95	Coordinating activities in resource planning.	Annual meeting at the District/Forest level to review current conditions and trends. Informal contacts between respective BLM & Forest Service staffs.	None	Provides an informal mechanism for continual and appropriate cooperation in the development and revision of land use analysis & land use plans.

TABLE 7.2 (Cont'd)

Structure of the relationship. (Boundries, key people, organization)	Purpose of the relationship, subject of agreement, and agreement number	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
<p>Land in New Mexico</p> <p>Regional Director - Fish & Wildlife Service Regional Forester - For. Ser. State Director - BLM</p> <p>Director - New Mexico Department of Agriculture Director - NM&F</p> <p>F&WS, FS, BLM NMDA, NM&F</p> <p>-----</p>	<p>Formal cooperation</p> <p>Interagency animal damage control - Guidelines in New Mexico.</p> <p>NMSO-87</p> <p>-----</p>	<p>Established guidelines for program of animal damage control. Identifies responsibilities of the Agencies. Established guidelines and procedures for field offices. Assures uniform approach and interpretation by field personnel for animal damage control.</p> <p>-----</p>	<p>Annual meeting is required BLM must designate a representative to implement agreement.</p> <p>-----</p>	<p>None</p> <p>-----</p>	<p>Detailed guidelines identifying responsibilities of each agency contained in agreement.</p> <p>-----</p>
<p>No boundaries defined</p> <p>Chief-Forest Service Director-Bureau of Land Management Administrator- Soil Cons. Service Director-Fish & Wildlife Service</p> <p>FS, BLM, SCS, F&WS</p>	<p>Formal cooperation</p> <p>Related to classification and inventories of Natural Resources.</p> <p>WO-103</p>	<p>The planned liaison and cooperation between agencies in survey; inventory, appraisal, assessment & planning activities.</p>	<p>Monthly meetings of agency representatives. Coordination is established in 18 different areas.</p>	<p>None</p>	<p>Will help resolve differences between agencies and provide for liaison & cooperation for certain activities.</p>

TABLE 7.2 (Cont'd)

Structure of the relationship. (Boundries, key people, organization)	Purpose of the relationship, subject of agreement, and agreement number	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
Public lands intermingled with and used in conjunction with private lands in Soil Conservation Districts. State Director - BLM State Conservationist - Soil Conservation Service SCD, SCS, & BLM -----	Formal cooperation Joint assistance by landowners and operators on private and Federal lands. -----	Develop, coordinate, and initiate resource conservation program. -----	Joint committee to explore and develop ways to cooperate effort. Field people should become familiar with differences in technological standards, policies, procedures, and programs of SCS. -----	Differences in technical standards Continue close contact. -----	Uniform management and treatment through working with SCS critical. -----
McGregor Range Assistant Secretary - Army Director - BLM Army & BLM	Formal cooperation Grazing Administration on McGregor Range WO-19	The grazing program on McGregor Range.	The District Manager will keep the Commanding General informed of the name and address of each current grazing contractor. Stipulations provided in agreement to be made a part of each grazing contract.	None	Program is large and there are many details both commitments and restraints.

TABLE 7.2 (Cont'd)

Structure of the relationship. (Boundries, key people, organization)	Purpose of the relationship, subject of agreement, and agreement number	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
<p>AEROBEE 350 - ATHENA H ABRES - 4 Projects within White Sands Missile Range</p> <p>Chief, Real Estate Division, Department of the Army</p> <p>State Director, BLM</p> <p>Army & BLM</p> <p>-----</p>	<p>Formal cooperation</p> <p>Safety Area, WSMR AEROBEE 350, ATHENA -H, ABRES 4 Projects.</p> <p>NMSO-16</p> <p>-----</p>	<p>Co-use of those areas within the boundaries mentioned, with evacuation when necessary.</p> <p>-----</p>	<p>Notification of loss or damage is provided for. In lieu of restoration by the Army, BLM may repair or replace fence with cost being reimbursable. BLM must notify Army of change in inventory of improvements. Fire suppression cost are reimbursable.</p> <p>-----</p>	<p>None</p> <p>-----</p>	<p>Use of this area is restricted to grazing activities only.</p> <p>-----</p>
<p>Public lands adjacent to NASA Test Facility</p> <p>District Manager and NASA</p> <p>NASA - Corps of Engineers BLM</p>	<p>Formal cooperation</p> <p>NASA Safety Buffer Zone</p> <p>NM-030-13</p>	<p>NASA Safety Buffer Zone as primary use of land.</p> <p>Present low level of use to continue.</p>	<p>Include Management Plan consistent with agreement in Organ MFP. NASA Safety Buffer Zone is one of the primary uses of land. Consult WSMR if expect more people to be in area than normal. Present land uses continue at present low level of intensity. Maintain low level of human activity. Review every 10 years.</p>	<p>None</p>	<p>Take buffer zone hazards into consideration and establish policies and procedures to go along with agreement. Critical for planning.</p>

TABLE 7.2 (Cont'd)

Structure of the relationship. (Boundries, key people, organization)	Purpose of the relationship, subject of agreement, and agreement number	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
Sites on McGregor Range U.S. Army Air Defense Center & Ft. Bliss Board of Regents - NMSU State Director - BLM DOA, NMSU, BLM	Formal cooperation For preservation of study sites on McGregor Range (Ft. Bliss) NMSO-100	A general inventory review of the Flora & Fauna of 3 grassland areas, to protect and preserve the areas to determine ecological changes and to report causes & effects of the changes by the use of accepted fundamental techniques.	BLM will contact NMSU prior to construction of any facilities within these study sites; exclude livestock from the study sites; and discourage all activities which will cause disturbance to the vegetation cover & soil surface of the study sites.	None	Preservation will provide sites where natural ecosystem processes can be monitored. They can serve as bench marks for comparison of managed or impacted black grama lands. The effects of livestock grazing on other lands can be assessed. Also the sites will serve as a refuge for populations comprising the natural self-maintaining diversity of black grama grassland.
----- Boundry of the College Ranch President - New Mexico State University District Manager - BLM NMSU & BLM	----- Formal Cooperation Procedures for the Management of the leaseable minerals NM-030-11	----- The management of the leaseable minerals by the District Manager	----- The District Manager will notify NMSU of any action requested by mineral development companies. The University acknowledges in writing with stipulations or special considerations. University will notify BLM of any changes in proposed activities which might alter mineral development.	None	----- BLM must consider NMSU in decisions concerning the College Ranch. Must be evaluated every 5 years.

TABLE 7.2 (Cont'd)

Structure of the relationship. (Boundries, key people, organization)	Purpose of the relationship, subject of agreement, and agreement number	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
<p>On the Jornada Experimental Range, Las Cruces, N.M.</p> <p>Regional Administrator-Science and Education Administration Federal Research Procurment Analyst - BLM</p> <p>SEA & BLM</p>	<p>Formal cooperation</p> <p>Agreement to obtain phenology adjustment factor research.</p> <p>NMSO-99</p>	<p>SEA will characterize the seasonal development & life cycle of species populations by phenophases; determine threshold environmental triggers for phenophases of individual species; relate phenological stage to biomass production so the actual productivity of range sites can be estimated from single-point in time samples; and determine the impact of grazing on phenological development of plants.</p>	<p>SEA submits 3 yearly reports. BLM will reimburse SEA quarterly for costs and the final payment will be on receipt and approval of the final report.</p>	<p>None</p>	<p>Sound phenological data is needed to allocate vegetation in the Bureau Planning System. The government will own the data generated.</p>
<p>-----</p> <p>Lands along the Gila River in New Mexico withdrawn under Executive Order No. 5889</p> <p>Project Engineer - San Carlos Project</p> <p>Director - Grazing Service</p> <p>San Carlos Project Engineer and Grazing Svc.</p>	<p>Formal cooperation</p> <p>Agreement for the Administration of grazing lands withdrawn under Executive Order No. 5889.</p> <p>NMSO-31</p>	<p>Grazing on lands that have been withdrawn.</p>	<p>Each license or permit will contain a clause cancelling it upon notice that the lands are required by the government for the purpose for which originally withdrawn.</p>	<p>Agreement is old and may need to be updated.</p>	<p>Program size is large.</p>

TABLE 7.2 (Cont'd)

Structure of the relationship. (Boundries, key people, organization)	Purpose of the relationship, subject of agreement, and agreement number	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
Chief Highway Engineer New Mexico Highway Dept. State Director - BLM Division Engineer - Bureau of Public Roads NMSHD, BLM, BPR	Formal cooperation Highway construction through public domain. NMSO-53	Highway Construction	Highway Department will cooperate with BLM where highway construction projects are proposed over public domain, minimum requirements are contained in agreement. Highway Department is responsible for stable position of cadastral survey monuments subject disturbance during construction of a project.	Relations very good at this time.	Can reduce management problems with regard to access through co-operation.
-----	-----	-----	-----	-----	-----
State of New Mexico Governor of New Mexico State Director - BLM State of NM & BLM	Formal cooperation To establish a mechanism for involvement by the Governor in the development and revision of land use plans. Supplement to C.A. No. NMSO-76	Make available to the state all non-proprietary resource inventory data and land use data. Request state involvement in the preparation of environmental statements and environmental assessment records for major land use changes in the district.	Solicit & obtain State participation in developing plans, programs & proposals for management of public lands in your district and consider their views. Notify the Governor of Public meetings held during the planning process. Provide an opportunity to the State to review & comment on major conflicts & multiple use alternatives during the planning process.	None	Consider the States' views in decision making process. Provide a written explanation of how you addressed their written concerns. Ask for assistance in identifying areas of critical environmental concern.

TABLE 7.2 (Cont'd)

Structure of the relationship. (Boundries, key people, organization)	Purpose of the relationship, subject of agreement, and agreement number	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
<p>BLM lands in the Las Cruces District</p> <p>District Manager - BLM</p> <p>District Supervisor - Bureau of Sport Fisheries & Wildlife</p> <p>Manager, Las Cruces and Roswell, NMG&F</p> <p>New Mexico Game & Fish</p> <p>BLM, BSF&W, NMG&F</p> <p>-----</p>	<p>Formal cooperation</p> <p>Predator Management</p> <p>NM-030-9</p> <p>-----</p>	<p>Predator Management</p> <p>-----</p>	<p>Predator policy is management, not extermination. Emergency program is outlined. Wheeled traffic is confined to established roads. Areas are defined for traps and signs will be provided. Areas are controlled for hunting from helicopter and airplane. NMG&F will inform District of bear and cougar management programs on public lands. Control during hunting season is permitted.</p> <p>-----</p>	<p>Excellent working relationship.</p> <p>-----</p>	<p>Requests from ranchers to control predators can be acted upon.</p> <p>-----</p>
<p>Where there is common boundary between public land and State managed land.</p> <p>State Planning Officer State Planning Office</p> <p>State Director - BLM</p> <p>BLM and State Planning Office</p>	<p>Formal cooperation</p> <p>notification to State and local government through Clearing Houses.</p> <p>NMSO-15</p>	<p>Notification to State and local governments of BLM projects.</p>	<p>Identification of major construction transactions and land modification activities as approved in the Annual Work Plan will be reported to the Clearing House. Methods for identification and resolution of conflict between State and local plans and programs, such as conference for resolution, are provided for. Clearing House will notify BLM of projects by other agencies.</p>	<p>None</p>	<p>Fulfills BLM notification requirement.</p>

TABLE 7.3
IDENTIFICATION AND ANALYSIS OF INFORMAL RELATIONSHIPS
WS AND LC/L R. A

Purpose of the relationship	Structure of the relationship. (Boundries, key people, organization)	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
Cooperation	Southern Rio Grande Fred Huff	ORV use	Personal contact telephone and mail	Continued communication	Critical for public interest
Cooperation	District Dave Forman	Environment, Recreation & wilderness	Personal contact telephone and mail	Continued communication	Critical for public interest
-Cooperation	Western Part of District Dr. & Mrs. R.T. Skolls	Environment, Recreation & wilderness	Personal contact telephone and mail	Continued communication	Critical for public interest
Cooperation	District Brant Calkins	Environment, Recreation & wilderness	Personal contact telephone and mail	Continued communication	Critical for public interest
Cooperation	District Sunny Brownfield	Watershed & livestock	Personal contact telephone and mail	Continued communication	Critical for public interest
Cooperation	Gila Planning Area Jim Cuberson	Watershed & livestock	Personal contact telephone and mail	Continued communication	Critical for public interest
Cooperation	S.W. Planning Area Tommy Hiet	Watershed & livestock	Personal contact telephone and mail	Continued communication	Critical for public interest
Cooperation	S.W. Planning Area Smokey Nunn	Watershed & livestock	Personal contact telephone and mail	Continued communication	Critical for public interest
Cooperation	Gila P.U. Drummond Hadley	Environment & livestock	Personal contact telephone and mail	Continued communication	Critical for public interest
Cooperation	District Charley Lee	Ranching	Personal contact telephone and mail	Needs to understand why Bureau operates as it does. Need better communication and improved relations.	Rancher complaints, comments, ideas etc. are of critical importance, especially in future grazing ES for area.

TABLE 7.3 (Cont'd)

Purpose of the relationship	Structure of the relationship. (Boundries, key people, organization)	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
Cooperation	District Production credit	Lending money view on public lands	telephone & mail	More contact & communication	Critical importance Keep them informed
Cooperation	District Farm, home admin	Lending money view on public lands	telephone & mail	More contact & communication	Critical importance Keep them informed
Cooperation	District Federal Land Bank	Lending money view on public lands	telephone & mail	More contact & communication	Critical importance Keep them informed
Cooperation	Alamogordo P.U. Ted Bonnell B S I	Lending money view on public lands	telephone & mail	More contact & communication	Critical importance Keep them informed
Cooperation	District ASCS	ASCS Programs	Regularly contact by phone, mail personal	More contact & communication	Critical importance when programs overlap
Cooperation	Caballo P.U. Rod Hill Farm Bureau	Livestock	Regularly contact by phone, mail personal	More contact & communication	Important information trade
Cooperation	Southern Rio Grande Wes Greene Bureau of Reclamation	BR programs	Regularly contact by phone, mail personal	More contact & communication	Critical important when progs overlap
Cooperation	District SCS	SCS Programs	Regularly contact by phone, mail personal	More contact & communication	Critical important when progs overlap
Cooperation	District Resource conservation & develop council	Resources	Regularly contact by phone, mail personal	More contact & communication	Important information trade
Cooperation	District State Water Engineer	Watershed & ground water	phone & mail	More contact & communication	Critical importance when projs overlap
Cooperation	Otero Co. Bill Mershon Otero County Electric	Energy	phone & mail	More contact & communication	Critical importance when projs overlap

TABLE 7.3 (Cont'd)

Purpose of the relationship	Structure of the relationship. (Boundries, key people, organization)	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
Cooperation	District Mayors	City expansion	phone & mail	Need increasing contact & communications because of Bureau land around cities.	Increasing importance especially in SRG
Cooperation	District NM Wool Growers Assoc.	Livestock interests	phone & mail	More contact & communication	Important info trade
Cooperation	District Livestock inspection board	Brand identification count livestock	phone & mail	More contact & communication	Important info trade
Cooperation	District Cattle Growers Assoc.	Livestock interests	phone & mail	More contact, communication & understanding needed to improve relations.	Important info trade

TABLE V.3 (Cont'd)

Purpose of the relationship	Structure of the relationship. (Boundries, key people, organization)	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
Coordination	District Dr. Schemnitz NMSU Wildlife Dept.	Wildlife information trade	Personal contact & phone	No improvement needed	Very important for information trade
Coordination	District Dr. Conely NMSU Wildlife Dept.	Wildlife information trade	Personal contact & phone	No improvement needed	Very important for information trade
Coordination	District Dr. LaPoint NMSU Wildlife Dept.	Wildlife information trade	Personal contact & phone	No improvement needed	Very important for information trade

TABLE 7.3 (Cont'd)

Purpose of the relationship	Structure of the relationship. (Boundries, key people, organization)	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
Coöperation	District Archaeological Society of NM	Antiquities - general correspondence & antiquities inventory	Telephone & mail File 6231 & 6231.1	No improvement needed	Important local public interest group & info trade
Cooperation	Southern Rio Grande Dona Ana County Archaeological Society	Antiquities - general correspondence & antiquities inventory	Telephone & mail File 6231 & 6231.1	No improvement needed	Important local public interest group & info trade
Cooperation	Southern Rio Grande John A. Hedrick John V. Davis Dr. Kay Southerland El Paso Archaeological Society	Antiquities - general correspondence & antiquities inventory	Telephone & mail	No improvement needed	Important local public interest group & info trade
Cooperation	Southern Rio Grande Mr. & Mrs Roger Parsons Dr. Justin McCarthy Luna Co. Historical Society	Antiquities - general correspondence & antiquities inventory	Telephone & mail	No improvement needed	Important local public interest group & info trade
Cooperation	Sacramento Planning Area M. Renetta Friesen Tularosa Basin Historical Society	Antiquities - general correspondence & antiquities inventory	Telephone & mail	No improvement needed	Important local public interest group & info trade
Cooperation	District Dr. John Haskell ENMU	Professional Services antiquities & permittees	Telephone & mail Files 6231, 6231.1, 6231.4	No improvement needed	Information trade w/professional groups - critical
Cooperation	Southern Rio Grande Dr. Stan Bussey NMSU	Professional Services antiquities & permittees	Telephone & mail Files 6231, 6231.1, 6231.4	No improvement needed	Information trade w/professional groups - critical
Cooperation	District Dr. David Snow Museum of NM	Professional Services antiquities & permittees	Telephone & mail Files 6231, 6231.1, 6231.4	No improvement needed	Information trade w/professional groups - critical

TABLE 7.3 (Cont'd)

Purpose of the relationship.	Structure of the relationship. (Boundries, key people, organization)	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraint or commitments.)
Cooperation	District Mr. Frank Broilo Office of Contract Archaeology - UNM	Professional Services antiquities & permittees	Telephone & mail Files 6231, 6231.1, 6231.4	No improvements needed	Information trade w/professional groups - critical
Cooperation	Southern Rio Grande Dr. Frank Findlow Columbia University	Research permits & information trade	Telephone & mail	No improvements needed	High powered public interest group Critical important information trade
Cooperation	Southern Rio Grande Dr. Steve LeBlanc University of NM Mimbres Foundation	Research permits and information trade	Telephone & mail Files 6231, 6231.1, 6231.4	No improvements needed	High powered public interest group information trade Critical important
Cooperation & Coordination	District Tom Merlan State Planning Office (SHPO)	Special Protection Program & Historic Preservation	Telephone & mail Files 6231.2, 6230	No improvements needed	Information trade w/professional groups - Critical.
Cooperation & Coordination	District Mark Wimberly Human System Research Inc.	Research	Telephone & mail	No improvements needed	Important source for information trade.
Cooperation & Coordination	District Dr. W.E. King NMSU	Paleo information	telephone & mail	Need more understanding of Bureau policies & procedures to avoid conflicts.	Important source for information trade

TABLE 7.3 (Cont'd)

Purpose of the relationship	Structure of the relationship. (Boundries, key people, organization)	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
Cooperation & Coordination	District County commissioners	Future planning for growing communities	Personal contact, telephone, & mail	Coordination is good.	Critical - Need to know long range plans to anticipate demands.
Cooperation & Coordination	District City government	Future planning for growing communities	Personal contact, telephone & mail	Coordination is good.	Critical - Need to know long range planning anticipate demands
Cooperation & Coordination	District State Highway Dept.	Rights-of-Way	Personal contact, telephone & mail	Coordination is good.	Critical - because of size & complexity.
Cooperation & Coordination	Southern Rio Grande El Paso Electric	Rights-of-Way	Personal contact, telephone & mail	Coordination is good.	Critical - because of size & complexity.
Cooperation & Coordination	Southern Rio Grande El Paso Natural Gas	Rights-of-Way	Personal contact, telephone & mail	Coordination is good.	Critical - because of size & complexity.
Cooperation & Coordination	District Mt. Bell	Rights-of-Way	Personal contact, telephone & mail	Coordination is good.	Critical - because of size & complexity.
Cooperation & Coordination	District SOHIO	345 KV lines	Personal contact, telephone & mail	Coordination is good.	Critical - because of size & complexity.
Cooperation & Coordination	Sacramento McGregor Withdrawal	Withdrawn lands	Personal contact, telephone & mail	Coordination is good.	Critical - because of size & complexity.
Cooperation & Coordination	Southern Rio Grande Quintana Mining Corporation.	Permit	Personal contact, telephone & mail	Coordination is good.	Critical - because of size & complexity.

TABLE 7.3 (Cont'd)

Purpose of the relationship	Structure of the relationship. (Boundries, key people, organization)	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for ELM planning. (Constraints or commitments.)
Cooperation & Coordination	Benny Trujillo School Superintendent		Personal contact, telephone & mail	Coordination is good.	Critical - because of size & complexity.
Cooperation & Coordination	District State Parks & Recreation	Present & future recreation areas	Personal contact, telephone & mail	Need to set aside land for parks & recreation instead of taking what is left.	Most critical in SRG area because of population & higher land values.
Cooperation & Coordination	District City parks & recreation	Present & future recreation areas	Personal contact, telephone & mail	Need to set aside land for parks & recreation instead of taking what is left.	Most critical in SRG area because of population & higher land values.
Short term assistance from EPA to create a BLM air resource program	All public lands EPA and BLM	Development of air quality monitoring programs. Development of air quality personnel needs. Direct technical assistance on an exchange or temporary assignment for air quality personnel basis. Joint participation in the conduct of base line studies. Research on air shed allocation. Coordination action to enhance overall compliance of air quality laws. Conditions on leasing actions. Special monitoring situations. Identification of certain kinds of industrial sources of pollution.	Coordination meetings held occasionally.	Need to participate in joint studies with state air quality agencies, and work with EPA to set up air resource program	BLM must provide for compliance with pollution control laws under FLPMA

TABLE 7.3 (Cont'd)

Purpose of the relationship	Structure of the relationship. (Boundries, key people, organization)	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
Coordination	Southwest P.A. Ben Ormand Pacific Western Land Co.	Multiple resource interest	Telephone & mail	Maintain present relationship	Source of data - important
Coordination	Southwest P.A. Joseph Collesar Phelps-Dodge Co.	Mineral resources interest	Telephone & mail	Maintain present relationship	Source of data - important
Coordination	Southern Rio Grande Ben F. Schawberg	Mineral resource interest	Telephone & mail	Need in relationship for more understanding of BLM philosophy & procedures	Source of resource information - important. PR needed.
Coordination	Southern Rio Grande Milton E. Heins	Mineral resource interest	Telephone & mail	Need in relationship for more understanding of BLM philosophy & procedures.	Source of Resource information - important. PR needed.
Coordination	District NM Oil & Gas Assoc.	Mineral resource interest	Telephone & mail	Need in relationship for more understanding of BLM philosophy & procedures	Source of Resource information - important. PR needed.
Coordination	District Executive Secretary NM Mining Assoc.	Mineral resource interest	Telephone & mail	Need in relationship for more understanding of BLM philosophy & procedures	Source of Resource information - important. PR needed.

TABLE 7.3 (Cont'd)

Purpose of the relationship	Structure of the relationship. (Boundries, key people, organization)	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraint or commitments.)
Coordination	District Wes Leonard Wilderness Society	Wilderness interests	Telephone & mail	Maintain present relationship	Input in planning information trade - important
Coordination	Alamogordo & McGregor P.U. Ted Harrington Prairie Dog Motor Cycle Club	ORV interests	Telephone & mail	Maintain present relationship	Input in planning information trade - important
Coordination	Otero Co. Vivian Liston Otero County Riders Assoc.	ORV interests	Telephone & mail	Maintain present relationship	Input in planning information trade - important
Coordination	Uvas & organ P.U. Bill Ramsey El Paso 4x4 Club	ORV interests	Telephone & mail	Maintain present relationship	Input in planning information trade - important
Coordination	District Ted Zobeck NM Wilderness Study Comm.	Wilderness interests	Telephone & mail	Maintain present relationship	Input in planning information trade - important

TABLE 7.3 (Cont'd)

Purpose of the relationship	Structure of the relationship. (Boundries, key people, organization)	Plans that have impact on or relate to the NRL	Coordination established	Improvements needed	Implications for BLM planning. (Constraints or commitments.)
Coordination	District Bureau of Reclamation	Work on sedimentation damage	Little to no coordination	General contact.	Potential information & assistance importance.
Coordination	District Water quality control commission	Water quality	Little to no coordination	General contact.	Potential information & assistance import.
Coordination	District EPA	Water quality	Little to no coordination	General contact.	Potential information & assistance import.
Coordination	District NMG&F	Water quality fish habitat	Little to no coordination	General contact	Potential information & assistance import.
Coordination	District Bob Bishop Natural Resource conservation commission	Erosion control Water quality sedimentation	phone & mail	Good coordination maintain it	

Communities in the SEPA at present have very limited methods to actually control and direct orderly growth and development. Counties may either have a comprehensive plan for development or use subdivision regulations, which require very minimal restrictions. Cities, towns, and villages may have various comprehensive or master plans for development. Most municipalities in the SEPA use a zoning board or commission; counties have no zoning ordinances. The only exception to the county's lack of zoning is within the extraterritorial zoning area which is one, two or three miles from the boundary of a municipality, depending on the population. Within such extraterritorial zoning areas problems often arise because there is concurrent jurisdiction, involving both municipal and county authorities. The city is more likely to have extensive planning and zoning within the city limits, but the implementation can be a problem. Outside the city limits the problems increase. A board must be formed to include both city and county members. Even if the board is formed, choosing goals that all would be satisfied to achieve is a problem in itself.

More problems arise outside the extraterritorial zoning area. In vast areas of the SEPA there are no zoning authorities. Land use control in unincorporated districts is easily overlooked, because the population pressures are less and residents often prefer less planning and zoning. Although a desire for balanced and orderly growth in these areas is common to most county governments, the implementation of plans and zoning ordinances is inadequate.

Appendix E outlines planning and zoning regulations for counties and municipalities within the SEPA. The existence of agreements, memoranda of understanding, and current working relationships, including additional coordination needed is shown in Tables 7.2 and 7.3.

8.0 DISTRICT ORGANIZATION

8.1 Boundaries

The Las Cruces District is composed of three former districts: Border (New Mexico), Tularosa (NM-4), and Mesa (NM-5). These three districts were all among the first to be formed after the passage of the Taylor Grazing Act in 1934. Districts Four and Five were formed in April 1935, and District Three in July 1935. On October 7, 1947, Districts NM-5 (Mesa) and NM-4 (Tularosa) were consolidated into the new NM-4 District. An area in the northwest part of NM-4 added to NM-2 (Socorro) June 27, 1952. Eventually the Alamogordo (NM-4) and Deming (NM-3) offices were consolidated to form the present Las Cruces District on January 25, 1953. Each area retained separate identity with administration from Las Cruces under one District Manager, but were finally combined in 1965.

During the 14-year period from 1942 to 1956, several major military withdrawals from public lands in the SEPA were made to create the Fort Bliss, White Sands, McGregor and Guadalupe ranges. The Guadalupe withdrawal was partially relinquished in 1962, and land returned to BLM administration. However, in this area subsurface ordnance may remain undetected, and these lands have not opened to any form of appropriation under the public land laws, including the mining and mineral leasing laws, but are restricted to surface use only under Federal ownership. Another military withdrawal was partially returned to BLM administration in 1966 when a co-use agreement was signed with the Department of the Army whereby BLM would administer grazing and wildlife habitat on 515,000 acres of McGregor range. Another co-use agreement was signed June 7, 1974 with a proposed, agreed upon change signed July 22, 1976.

Boundaries of the Las Cruces District proper were realigned to more closely follow planning unit boundaries in September 1969. At the present time, the Las Cruces District is comprised of Grant, Hidalgo, Luna, Sierra, Dona Ana and Otero Counties. Also a small part of Socorro County and less than half of Lincoln County. The District boundaries follow county boundaries, fence lines and generally, planning unit boundaries.

8.2 Programs

Major programs in the Las Cruces District are built around specific legislation. The four major pieces of past legislation are the Taylor Grazing Act of 1934, Classification and Multiple Use Act of 1964, National Environmental Policy Act of 1969, and the Federal Land Policy and Management Act of 1976. These acts are the basis of long term development of national resources on public lands. Differences in program thrusts between districts may develop given different resources.

Taylor Grazing Act (TGA) of 1934 was a fairly comprehensive program for the improvement, development, and orderly use of the nation's resources. The basic philosophy of the act was management of the land until disposal. Prior to the passage of the Taylor Grazing Act, public lands were open range, unfenced and grazed without charge or regulation, by anyone with livestock. The TGA, by allocating (adjudicating) specific pasture areas to a rancher, served to encourage the development of range improvements and more careful grazing management that would preserve productivity. In this district, grazing privileges are attached to the water bases rather than land as in other areas of the country.

As a result of the TGA, the Grazing Division was formed to manage the grazing districts. In 1939, it was renamed the Grazing Service. Advisory boards were set up to advise and cooperate in matters dealing with management of the grazing districts. The responsibility for grazing leases on public lands, outside grazing district, continued to be with the General Land Office. By 1946, the Grazing Service and General Land Office combined to form the BLM. The new Bureau was responsible for all aspects of control, administration, recording transfer of public land as well as management of the grazing districts.

The effects of the Taylor Grazing Act upon the present are many. It marked the beginning of many of today's ongoing programs; primarily the effort to stop the deteriorating range conditions and bring grazing in line with grazing capacity. The adjudication procedure and range administrative units, still in use today, were established by the Taylor Grazing Act. The overall effect has been to stabilize the livestock industry and preserve productivity.

The Classification and Multiple Use Act (C&MU) of 1964 gave the authority to begin the orderly classification of the public lands to best meet the present and future needs of the American people. The categories for land use classification fell into four broad areas: best blocked areas, fragmented areas, specialized areas, and transfer areas. The shift to the multiple-use resource consideration was a major change in attitude for the users as well as the managers of the public land. The act specified that a variety of uses be managed such as: domestic livestock grazing, fish and wildlife development and utilization, industrial development, mineral production, occupancy, outdoor recreation, timber production, watershed protection, wilderness preservation, and preservation of public values that would be lost without retention in Federal ownership.

The public has become increasingly involved and concerned in BLM's effort to manage the public land. Through hearings, public participation meetings and extensive studies the Bureau is determining the wants and needs of the people. When the proposed classifications were published, the public was encouraged to submit comments and suggestions. It effectively became the citizen's opportunity and responsibility to help the BLM determine how public land would best serve the public needs.

There have been three lasting effects of the C&MU Act on the direction of the Bureau's programs: the practice to obtain and consider written and oral comments and advice from all interested individuals and groups; the withdrawal of land from sale; and the establishment of classification for multiple use management. Even though the Act has expired, the classifications are still valid. New Mexico 435 established the areas within the Las Cruces District that were to be withdrawn from sale and designation for long term retention and use under the principles of multiple use management.

The National Environmental Policy ACT (NEPA) of 1969, written primarily as a tool for resource protection, is continuing to have a sizable impact on the Bureau and its programs. The Act required every major Federal action on public land to have an environmental analysis prepared to insure resource protection. In 1973, a lawsuit was brought by Natural Resources Defense Council (NRDC) under the provisions of NEPA. In an attempt to comply with the provisions of NEPA, a programmatic environmental impact statement (EIS) was prepared on grazing lands. The EIS was found to be inadequate to protect the nation's resources. After much negotiation, the courts mandated a schedule of allotment management plan/environmental statement development. This district has been required to prepare grazing environmental impact statements for all public lands used for livestock grazing to be completed by 1985. As a result of the increased workload and limited timeframe imposed, there have been corresponding increases in personnel required. Until the completion of the environmental statements, no range improvement projects can be implemented if there is a change in the livestock grazing pattern. Range improvements may be permitted under an approved allotment management plan.

Increasing awareness and environmental concern brought out the next major piece of legislation: the Federal Land Policy and Management Act (FLPMA) of 1976. The Organic Act, as it is more popularly known, repeals old land laws and gives new management authority. It declares the policy of the United States to be retention of the public lands in Federal ownership except for individual tracts which may be disposed of in the national interest.

A summary of the Act and its major provisions follow. References to specific sections of the Act are included in parenthesis. The Organic Act established congressional oversight of agency decisions:

- Several types of management decisions made by the Bureau must be sent to Congress for review and are subject to "veto" by concurrent resolutions of the House and Senate. Among them are: (1) decisions eliminating one or more principal uses of land for two or more years on tracts containing more than 100,000 acres of public land (202); (2) decisions to sell tracts of public land in excess of 2,500 acres (203); (3) withdrawals of tracts of public land in excess of 5,000 acres. (204)

- It allows the Department of the Interior to use money from the Land and Water Conservation Fund to acquire land needed for the proper management of public recreation lands. (318)

- It adds two areas to the King Range National Conservation Area. (602)

The Organic Act outlined new procedures for planning and managing public lands:

- The Act requires the inventory and identification of the public lands and provides authority for marking and mapping of these lands as funds and manpower are made available. (201)

- It calls for comprehensive land use planning. (202)

- It provides broad management authority under principles of multiple use and sustained yield in accordance with land use plans. (302)

- It provides for a comprehensive long-range plan and an interim program for the California Desert Conservation area. (601)

- The Act calls for public participation in land use planning and other aspects of land management, including public hearings, public meetings and the submission of written comments and suggestions prior to reaching management decisions in many areas of public land management. (202)

The Organic Act authorized individual use of public lands:

- The Act authorizes the Department of the Interior to issue easements, permits, licenses and leases including long-term leases to individuals for the habitation, cultivation and for the development of small trade and manufacturing concerns. (302)

The Organic Act established a requirement for its enforcement and the enforcement of agency regulations:

- The Act provides for the enforcement of public land laws and regulations by Federal personnel or by appropriate local officials authorized by the Secretary of the Interior. (303)

- It authorizes cooperative agreements between the Department and local regulatory and enforcement authorities. (303)

- It authorizes the Secretary of the Interior to make rules and regulations pertaining to the public lands. (310)

The Organic Act recast BLM finances:

- It reasserts some provisions of the Public Land Administrators Act and authorizes the Secretary of the Interior to establish service charges and to require payment for the execution of applications and other documents pertaining to the public lands and to refund excess payments made to the Department. (305)

- It establishes a capital working fund for the Bureau of Land Management. (306)

- It allows the Secretary of the Interior to accept contributions. (307)

- It allows the Bureau to renew contracts for aircraft used in survey and resource protection twice annually within each year without further competition. (303)

- It requires specific authorization for appropriations for all BLM programs with requests to be made every four years. (318)

The Organic Act addressed grazing on public lands:

- It authorizes the Secretary to conduct a study to determine the value of domestic livestock grazing on the public lands so that he may establish an equitable fee. Grazing fees may not be raised until a report is submitted to Congress. It prohibits any raise in the grazing fee for the year 1977. (401)

- It provides for ten-year grazing permits and for two years notice before any permit is cancelled in order to use the land for another public purpose unless there is an emergency situation. (402)

- It provides a formula for the distribution of funds collected from grazing fees. Fifty percent of all money collected will be used for range improvement programs. One-half of this money must be spent in the district or region where it is collected. The rest of the 50 percent may be spent in other areas at the discretion of the Secretary of the Interior. It also exempts the annual distribution and use of range improvement funds from provisions of the National Environmental Policy Act. (401)

- It provides for the appointment of grazing advisory boards to advise the Secretary of the Interior on allotment plans and on the distribution of range improvement funds. (403)

- It authorizes the use of helicopters in the administration of the Wild Horses and Burros Act. (404)

The Organic Act addressed mineral and energy resources on public lands:

- It provides a formula for the distribution of funds collected under the Mineral Leasing Act of 1920 and under the Geothermal Steam Act of 1970. (317)

- It authorizes loans to States and local governments to relieve social and economic impacts caused by mineral development. (317)

- It requires persons now holding mining claims under the General Mining Law of 1872 to record those claims with the Bureau of Land Management. Failure to record claims will be considered evidence of abandonment. (314)

In addition, the Organic Act had numerous other features:

- It authorizes the Secretary to control mining to the extent that he can, by regulation or otherwise, take actions necessary to prevent unnecessary or undue degradation of the land. (302)

- It authorizes the Bureau to revoke use permits when the permittee violates certain laws. (302)

- It prohibits unauthorized use, occupancy, or development of the public lands. (303)

- It authorizes studies, allows the Secretary to enter into cooperative agreements and to accept contributions. (307)

- It requires an annual report to be made on public lands. (311)

- It allows BLM personnel to enter into search and rescue operations.

- It allows the Secretary to make corrections in patents and other public land documents. (316)

- It provides broad authority to grant right-of-way across public lands and to insert terms and conditions for their use. It allows cost sharing in financing the construction of roads and allows the Bureau to create rights-of-way corridors and to suspend or terminate the use of rights-of-way. (501-511)

- It directs the Bureau of Land Management to complete a study of potential wilderness areas within 15 years. (603)

- It repeals many of the old public land laws, including the Homestead Act for all States of the United States except Alaska where it will continue to be in force for ten years. (702)

- Although the Federal Land Policy Act is now the law of the land, some of its provisions cannot be implemented until the Department of the Interior has adopted implementing regulations. Interior officials say that this will take some time. However, under the provisions of the new Act, all Departmental regulations will remain in force until replaced by the new regulations, and will serve as the basis for administration of the public lands until new regulations to implement the Act are adopted.

8.3 Resource Areas

The current nine planning units in the Las Cruces District are grouped into the White Sands and the Las Cruces-Lordsburg Resource Areas. Even distribution of workload and geographical location are the main reasons for the definition of resource area boundaries.

The White Sands Resource Area has been geographically broken up by the White Sands Missile Range Withdrawal, the Mescalero Reservation and the Lincoln National Forest. The boundary is roughly from Claunch through the Tularosa Basin, outside White Sands Missile Range, joining the Forest Service and Mescalero Reservation on the east and south to the Texas state line; east of the Tularosa Basin to Lincoln National Forest (Guadalupe Mountains) bounded by the Lincoln National Forest portion of the Sacramento Mountains on the north. Those lands lying north of Hatch and NM 26 to the Socorro County Line on the north are bounded by the Gila National Forest on the west, and White Sands Missile Range on the east. East of the San Andres Mountains the management problems, socioeconomic structure, and types of resource production and use are fairly homogeneous. The Caballo Planning Unit, west of the San Andres Mountains, presents different problems especially in the area of economic development and transportation, but have become a part of the White Sands Resource Area in the interest of an even workload for both Area Managers.

The primary resource production in the White Sands Resource Area is cattle with sheep production being only a small part. Some of the growing land uses in the area are exploration for oil, gas, and geothermal potential. Recreation makes up a relatively small part of the land use east of the San Andres with the military being the major economic influence. West of the San Andres (the Caballo Planning Unit), recreation has a large economic impact because of the large bodies of water. The users of the White Sands Resource Area are fairly scattered throughout, as there is one major city centrally located within each planning unit.

The Organic Act defined new rules for the disposition of public lands:

- The Act prohibits the sale of public land to non-citizens or to corporations not incorporated under State or Federal law. (207)

- It provides authority for the Secretary of the Interior to insert terms and conditions into patent to insure the proper land use and to protect the public interest. The Secretary is prohibited from inserting terms and conditions into land patents that violate existing State and local land use plans and programs. (208)

- It provides for the reservation of minerals to the United States in public land sales, but allows for conveyance of such rights in certain specified situations. (209)

- It requires the Bureau to notify State and local governments of pending land sales in order to give them an opportunity to zone or otherwise regulate the use of the land before the sale. (210)

- It authorizes the Secretary of the Interior to dispose of certain omitted lands without a survey. (211)

- It amends the Recreation and Public Purposes Act by increasing the amount of land that the Bureau can sell or lease under its authority and allows some leases of land for recreational use without charge. It also requires public participation on all decisions to dispose of public land under the Recreation and Public Purposes Act, for the Secretary to determine that the land requested under the Act is to be used for an established or definitely proposed project, and the preparation of comprehensive land use plans and adoption of zoning regulations for disposals in excess of 640 acres. (212)

- It amends the Unintentional Trespass Act to allow the rights of first refusal to persons having preference rights and the establishment of fair market value of such land as of September 26, 1973. (214)

- It provides for cash payments to equalize values when public lands are exchanged for private land provided the payment does not exceed 25 percent of the total value of the public land being transferred. (206)

The Organic Act defined new rules for land acquisitions:

- It provides authority for the Bureau of Land Management to acquire land where such acquisitions are consistent with the Departmental mission and with applicable land use plans, but it limits the use of power of eminent domain to certain specified situations in the acquisition of land.

The Las Cruces/Lordsburg Resource Area is a more solid geographical area. The boundary extends from the Organ Mountains west to the Arizona border and roughly between Cliff, Silver City, and Hatch south to the Mexican border. Because this resource area is a well-blocked geographical unit, transportation problems are at a minimum. The management problems, types of resource production and use and socioeconomic structure are fairly consistent and similar throughout.

The planning units in the resource area have been formally classified for cattle use only because there is a lack of sheep. Most of the geothermal exploration of this district is located within the Las Cruces/Lordsburg Resource Area. Although mining and livestock have been the historical land uses, geothermal steam, oil, gas and recreation have grown in importance. The user groups in this resource area are concentrated close to the cities; however, similar to the White Sands Resource Area, there is at least one major city within each planning unit which makes for a fairly even distribution of users.

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APPENDIX A

LOW, MEDIUM, & HIGH POPULATION PROJECTIONS, SOUTHWESTERN NEW MEXICO SEPA, 1980-2000

County	1980 ^a			1990 ^b			2000 ^b		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
Dona Ana	86,100	88,600	92,100	101,900	105,200	109,500	117,700	121,800	126,900
Grant	24,500	25,900	26,700	29,300	31,100	33,100	34,100	36,300	39,500
Hidalgo	5,500	5,800	6,000	6,500	7,200	7,600	7,500	8,600	9,200
Luna	16,400	17,600	18,300	19,200	20,800	22,100	22,100	24,000	25,900
Otero	45,300	46,900	48,300	49,700	52,500	55,500	54,100	58,900	62,700
Sierra	8,300	8,600	8,800	9,700	10,200	10,800	11,100	11,800	12,800
SEPA	186,100	193,400	200,200	216,300	227,400	238,600	246,500	261,400	227,000

Source:

^aJohn Temple, "New Mexico's Population Projected to 1985," New Mexico Business, October, 1976

^bExtrapolations from projection for 1980 and 1985 as given in a, Temple.

APPENDIX B

DERIVATION OF DATA PRESENTED IN REGIONAL ECONOMIC ANALYSIS

In tables and text contained in Section 3.0, data for both income and employment were obtained from the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) automated system in the form shown with the exception of figures given for the two agricultural sectors, ranching and farming and forestry. These figures were estimated for employment on the basis of BEA information for agriculture as a whole, and of Bureau of the Census information from the 1974 Census of Agriculture, according to the following formula:

$$A \times \frac{\text{Number of cattle farms}}{\text{Total number of farms}} + \frac{\text{Total income derived from cattle \& calves}}{\text{Total agricultural income}} = B$$

2

where A = total agricultural employment, and
B = total ranch employment

For ranch income, a simple ratio from the 1974 census was utilized with the 1977 BEA figures.

It should be noted, however, that BEA data does not necessarily conform to data reported by the New Mexico Employment Security Commission, due to differences in basic definitions and data collection techniques. Consequently the agricultural figures as derived and the figures for other sectors as cited will vary between the two sources.

APPENDIX C

DERIVATION OF DATA PRESENTED IN RESOURCE INDUSTRY ANALYSIS

Livestock Forage

Forage production figures for public lands were obtained from the BLM Denver Service Center, Data Processing Center, in the form of grazing use allowed under active grazing permits. AUM's for cattle and sheep are given in Table 4.2 directly from the information supplied from the "Summary of Grazing Permittees." BLM forage production figures represent only part of the total forage production available to livestock, in that livestock are also actively grazed on state and private lands and in feed lots and stock pens. To make the BLM forage production figures meaningful, it was necessary to draw a relationship between the total forage requirements of the livestock industry as a whole compared to the total forage available on public domain lands. The following methodology was followed.

The New Mexico Agricultural Statistics 1976, Vol. VII, Supplement IV, 1976, put out by New Mexico State University in 1977 provides the most complete, current, and consistent information on livestock inventory for the SEPA available. The inventory figures for cattle and sheep from the table entitled "Livestock Inventory: Number on Farms, by Counties, January 1, 1977" were utilized to portray the total number of livestock consuming forage within the SEPA during the preceding year (1976).

The total number of dairy cattle was subtracted from the total for all cattle to arrive at a figure for total range cattle in the SEPA. The totals for range cattle and sheep were then multiplied by 12 (for the number of months in a year) to arrive at a total yearly forage requirement (in AUM's) for the livestock industry.

The sheep AUM's for both total forage requirements and BLM forage production were divided by five (5) to arrive at figures in cattle AUM equivalents. These sheep AUM equivalents "were then added to the cattle AUM figures for "total requirements" and "BLM production."

The "total forage production" available from BLM was then divided by the "total livestock requirements" to arrive at the percentages for the "dependency of the livestock industry on public domain lands for grazing purposes."

In the column "Ranch Operators," the apparent inconsistencies between the numbers of "total active ranchers" and "BLM Grazing Permit Holders" for Hidalgo and Sierra Counties is the result of two factors.

The most obvious is that two different sources were utilized in arriving at these figures. Larry Foster, the Extension Service Beef Cattle Specialist, provided the figures on total active ranchers to Harbridge House because these figures were unavailable from any other qualified source. These figures are then the product of Mr. Foster's research. The number of "BLM Grazing Permit Holders" was provided by the BLM Denver Service Center, Data Processing Center, from their "Summary of Grazing Permittees."

The second reason for the differences in Hidalgo and Sierra Counties may lie in that some "subsistence" level and "small commercial" level ranchers/permit holders are sub-leasing their acreages to other ranch operators and not running any cattle of their own in order to maximize the income from their permits by avoiding any capital outlay on their part. This would have the effect of decreasing the number of "total active ranchers" while the number of actual "BLM Grazing Permit Holders" would remain constant, and would influence Larry Foster's figures in relation to BLM figures.

Projections of future demand for livestock forage were obtained in two ways. The low projections are based on numbers of livestock projected for each county in the SEPA in William N. Caperer and Earl Sorensen "Water Requirements for Livestock in New Mexico, 1980 - 2020" technical memorandum of New Mexico State Engineer's Office. The high projections are based on linear projections from numbers of livestock reported for each county in the 1969 and 1974 Census of Agriculture.

Outdoor Recreation

Base figures for public demand for the recreational activities shown were obtained from the revised New Mexico State Comprehensive Outdoor Recreation Plan (SCORP), as given by the New Mexico Department of Parks and Recreation in preliminary form in August, 1978. Dependency on public lands was calculated on the basis of figures given in the "Las Cruces District Profile" prepared by the Las Cruces District Office of the BLM, and partially reported in the Sacramento Social Economic Profile prepared in 1977. Dependency ratios are rough approximations and should be revised when specific information on which to base alternative ratios is obtained.

APPENDIX D

NON-FEDERAL LAWS RELATING TO PUBLIC LANDS IN
SOUTHWESTERN NEW MEXICO

SEPA

NON FEDERAL LAWS

Activity: Lands *-1
Source(s): N.M.S.A.-1953-Vol.2 -Part 2

Date: 14 June, 1978

Statute #	Title	Activity Affected	Resource Consideration
7-2-1.	Lands erroneously set apart - quit claim to United States - selection of lands thereof	Lands	
7-2-1.1.	Jurisdiction - transfer procedure.	Lands	
7-2-1.2	Jurisdiction-civil process-concurrent jurisdiction.	Lands	
7-2-11.	Exchange of lands with United States.	Lands Minerals	Land Exchange Mineral Rights
7-3-1.	Possessory rights of occupant - notice and record - abandonment. **	Lands	
7-3-3.	Transfer of rights - consent of wife - exemption from sale under execution.	Lands Range Minerals Watershed	Trespass Range Improvements Compensated Mining Improvements Compensated Watershed Improvements Compensated
7-3-4.	Timber and articles reduced to possession-property right.	Lands Minerals Range Forest & Veg. Prod. Wildlife	Trespass without permits " " " " " " " " " " " " Forage Allocation
7-3-5.	Common pastures.	Range	Forage Allocation
7-3-6.	Use of common pastures	Range	Forage Allocation
7-3-7.	Meadows in common pastures enclosure for hay.	Range	Forage Allocation
7-3-11.	Unlawful enclosure of public lands.	Lands Range	Trespass Forage Allocation

*This is not a final listing of laws for lands activity.

Non-Federal Laws (cont'd.)

Activity: Lands *-1
Source(s): N.M.S.A.-1953-Vol.2-Part 2

Date: 14 June, 1978

Statute #	Title	Activity Affected	Resource Consideration
7-3-13.	Right to appropriate and stock range on public domain-conditions.	Lands Range Watershed	
7-3-14.	Second or subsequent use of range conditions.	Lands Range Watershed	
7-8-1.	Application for lease or purchase-appraisement.	All	Support Needs
7-8-27.	State irrigable lands-sale-conveyance to United States.	Lands Watershed	
7-8-32.	Power of commissioner to reject lease application by a previous lessee when land is located within Taylor Grazing allotment of another.	Range	
7-8-33.	Open and unleased Land within Taylor Grazing Allotment of another.	Range	
7-8-61.	Rights of Way - grants - price.	Lands	Support Needs
7-8-62.	Rights of way interference with roads of highways.	Lands	
7-12-2.	Fire prevention and watershed protection-agreement with Federal or Private agencies.	Forest & Veg. Prod.	
7-15-12.	Combining geothermal resources.	Minerals	Trespass

REMARKS

** This law may not be applicable to any lands, except Desert Entry Lands since repeal of the Homestead Act.

11044 10010
7171-3

Non-Federal Law

Activity: Forest & Vegetative Prod.* - 1

Date: 26 May, 1978

Source(s): N.M. Forestry Laws

STATUTE #	TITLE	ACTIVITIES AFFECTED	RESOURCE CONSIDERATIONS
7-12-2.	Fire prevention and watershed protection-agreement with federal or private agencies.	All	Cooperative agreements
40-18-6.	Arrests for violating forest fire laws.	F.&V.P.	Support needs
40A-8-1.	Public nuisance.	All	Support needs
40A-8-2.	Polluting water.	Watershed Wildlife Recreation Lands	Support needs
40A-8-4.	Unlawful disposal of refuse.	Recreation	Support needs
40A-14-1.	Criminal trespass.	Recreation Range	Support needs
40A-15-1.	Criminal damage to property.	F.&V.P. F.&V.P.	Support needs
40A-17-1.	Improper handling of fire.	Watershed Range F.&V.P. Wildlife Recreation	Support needs
✓ 45-8-22.	Plant Protection Act	F.&V.P.	Vegetative removal
45-8-23.	Definitions (part C)	F.&V.P.	Vegetative removal
✓ 45-8-26.	Inspection before sale.	F.&V.P.	Vegetative removal
✓ 45-8-30.	Permit for shipping from out of state.	F.&V.P.	Vegetative removal
45-8-31.	Labels	F.&V.P.	Vegetative removal
45-8-32.	Native plants-sales-inspection fee-tags.	F.&V.P.	Vegetative removal

*This is not a final listing of laws for forest and vegetative products activity.

Non-Federal Laws (cont'd.)Activity: Forest & Vegetative Prod.* - 2Date: 26 May, 1978Source(s): N.M. Forestry Laws

STATUTE #	TITLE	ACTIVITIES AFFECTED	RESOURCE CONSIDERATIONS
✓ 45-8-34.	Transporting within the state-inspection tags.	F.&V.P.	Vegetative removal
66-1-1.	Protection of grow- ing timber-public policy.	Minerals F.&V.P. Wildlife Recreation	Fire management Water quality Habitat management Recreation
62-1-2.	Logging operations- fire prevention- reserving young trees and seed trees- fire lines.	F.&V.P. Range Wildlife Recreation	F.&V.P. management Habitat management Forage management Fire suppression
62-1-4.	Commissioner of public lands- examin- ation of lands- in- spection of operations- cooperation with federal agency-appropriations.	F.&V.P.	Cooperative agreements
62-1-13.	Cutting and removing trees without written consent-christmas tree tag fee.	F.&V.P.	Vegetative removal
62-3-6.	Commission to serve as contracting agency for state.	All	Cooperative agreements
62-3-9.	Enforcement of laws- investigation of violations.	Lands Range F.&V.P. Wildlife Recreation	Support needs

*This is not a final listing of laws for forest and vegetative products activity.

Non-Federal Law

Activity: Range* - 1

Date: 25 May 1978

Source(s): N.M. Livestock Laws

STATUTE #	TITLE	ACTIVITIES AFFECTED	RESOURCE CONSIDERATIONS
47-3-1.	Contagious and infections disease-quarantine-reg- ulations.	Range	Wild horse and Burro management
47-3-2.	Report of diseased animals-offenses- recovery of duties of sheriffs and constables.	"	" "
47-3-4.	Dead animals-disposal.	"	" "
47-3-5.	Infected pastures and buildings-notices.	"	" "
47-3-10.	Federal Act-powers and authority of inspectors.	"	" "
47-4-2.	Infected districts publication of notice- dipping regulations.	"	" "
47-4-4.	Inspectors-employment- compensation-duties- reports-powers.	"	" "
47-4-6.	Dipping-supervision- certificate-fees.	"	" "
47-9-25.	Importation of animals- permit required-penalty.	"	" "
47-9-29	Inspection of livestock for export-application- place-payment for delay.	"	" "
47-9-34.	Exportation of livestock- receiving for shipment without inspection unlawful.	"	" "

REMARKS: See page 3.

*This is not a final listing of laws for range activity.

Non-Federal Law (cont'd.)Activity: Range* - 2Date: 25 May 1978Source(s): N.M. Livestock Laws

STATUTE #	TITLE	ACTIVITIES AFFECTED	RESOURCE CONSIDERATIONS
47-9-35.	Inspection fees- lien-record.	Range	Wild horse & Burro management
47-9-36.	Penalty for viola- tion of inspection and fee require- ments.	"	" "
47-9-38.	Transportation of horses, mules, asses, cattle, sheep or goats or carcasses there of- inspection certi- ficate.	"	" "
47-9-39.	Notice of intention to transport-date and place of in- spection.	"	" "
47-9-41.	Ownership-poss- ession-trans- portation (etc.)	"	" "
47-9-42.	Officers may stop vehicles-failure to have certificate -arrest and seizure.	"	" "
47-9-47.	Suspected trans- portation of stolen livestock search of vehicles- requiring proof of ownership- arrest-seizure.	"	" "
47-9-59.	Unloading live- stock for feed, rest and water.	"	" "

REMARKS: See page 3

*This is not the final listing of laws for range activity.

Non-Federal Law (cont'd.)Activity: Range* - 3Date: 25 May 1978Source(s): N.M. Livestock Laws

STATUTE #	TITLE	ACTIVITIES AFFECTED	RESOURCE CONSIDERATIONS
47-12-1.	Driving herds through fenced lands-restrict- ions penalty for violations.	Range	Wild horse and Burro management

REMARKS: Co-op agreement between BLM, F.S. and N.M. Livestock Board is being drafted. Final agreement will cover certain laws in this listing; therefore, changes will need to be made in this list at a later date.

*This is not a final listing of laws for range activity.

W. A. Austin
8/11/78

Non-Federal Laws

Activity: Wildlife - 1

Date: May 25, 1978

Source(s): N.M.D.G. & F. Game Laws

STATUTE #	TITLE	ACTIVITIES AFFECTED*	RESOURCE CONSIDERATIONS*
45-11-1.	Enumeration of Protected plants.	All	Endangered-threatened plant species
44-11-2.	Removal of plants from state lands or private lands without permission prohibited.	All	Endangered-threatened plant species
53-2-1.	Power to regulate hunting and fishing	Wildlife Recreation	Habitat management Rec. - hunting & fishing, etc.
53-2-2.	Game to be protected.	All	Forage requirements Watershed problems
53-2-3.	Protected wildlife species and game fish defined	All	Habitat Management Recreation consideration
53-2-4.	Bullfrogs classed as protected species	All	Habitat management Recreation consideration
53-2-15.	Songbirds-trapping, killing or injuring prohibited	Wildlife Recreation	Habitat management Endangered-Threatened species Recreation consideration
53-2-22.	Enforcement of Game laws-powers of conservation officers.	All	Watershed-water quality support needs
53-2-54.	Endangered species	All	Endangered and threatened animal species
53-2-55.	Management programs	All	Co-op agreements
53-2-59.	Enforcement-powers of conservation officers.	Wildlife	Co-op agreements

*This is not a complete listing of points or activities that may need to be considered when working on NFP.

Non-Federal Laws (cont'd.)

Activity: Wildlife - 2
 Source(s): N.M.D.G. & F. Game Laws

Date: May 25, 1978

STATUTE #	TITLE	ACTIVITIES AFFECTED*	RESOURCE CONSIDERATIONS*
53-3-23.	Permit to take game, birds or fish, etc.	Wildlife	Habitat mgmt. studies
53-4-12.	Reduction in-flow of water detrimental to fish in stream flow.	Wildlife Recreation	Habitat mgmt. Rec.-fishing
53-6-3.	Restrictions on motor vehicle use-recommendations-rules and regulations	Wildlife Recreation Watershed	Habitat mgmt. ORV restriction, etc.
53-6-5.	Prohibition against vehicle travel.	Range	
53-7-3.	Administration ("Shooting Range Fund Act")	Recreation Lands	Rec. recommendations R&PP recommendations
62-1-13.	Cutting and removing trees without written consent-christmas tree tag fee.	Forest and veg. products	Plant removal recommendations
64-36-3.	Snowmobile registration	Wildlife Recreation	Habitat mgmt. Rec. considerations
64-36-7.	Equipment and operation general provisions		

Remarks: See Page 3

*This is not a complete listing of points or activities that may need to be considered when working on MFP.

Non-Federal Laws (cont'd.)

Activity: Wildlife - 3

May 25, 1978

Source(s): N.M.D.G. and F. Game Laws

Remarks:

45-11-1 and 45-11-2. Being revised by N.M.D.G. & F. New listing being compiled-should include endangered-threatened species.

53-2-1 Example conflict between habitat management and seasons for hunting-fishing. Managing nesting habitat for Mexican Duck when Bullfrog season starts before nesting season finished. Bullfrog season postponed two weeks (1976) at San Simon Cienega for nesting waterfowl. (co-op agreements may need to be recommended if other similar problems exist.)

APPENDIX E

COUNTY AND MUNICIPAL LAND USE AND ZONING AGENCIES IN
SOUTHWESTERN NEW MEXICO

SEPA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JUN 1 '78

LAND USE PLANNING AND ZONING BY LOCAL GOVERNMENT CHECKLIST

1. County Sierra	2. City or Town Truth or Consequences, NM
3. Classification 1st Class under	
4. Population 7100	5. Form of Government County
6. Commission/Office - Date established 1884	
7. Plan in effect - Date Oct. 9, 1973	
8. Plan pending	9. Type of plan Land Subdivision
10. Scope of plan	11. Assistance obtained Council of Governments
12. Plan written by Council of Governments	
13. Other (specify)	

ZONING STATUS

14. Zoning authority -	15. Date zoning authority established -
16. Date zoning established -	17. Type of zoning -
18. Zoning follows planning -	
19. Other (specify)	

OTHER CONTROLS, CODES, AND ORDINANCES

20. Official Map Subdivision Maps	21. Building Code -
22. Housing Code -	23. Subdivision Regulations In Sierra County
24. Sign Control -	25. Dumps, junkyards
26. Other (specify)	

27. BLM District Las Cruces	28. Resource Area	29. Planning Unit
30. BLM Acreage 878494 BLM Acres	31. BLM Acreage as percent of total in county	
32. Local contacts for Planning and Zoning Status		

33. Remarks 878,494 B.L.M. Acres 277,1,200 Acres in County
243,600 National Forest

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JUN 1 '78

LAND USE PLANNING AND ZONING BY LOCAL GOVERNMENT CHECKLIST

1. County SIERRA	2. City or Town Truth or Consequences, New Mexico
3. Classification 1st Class Under	
4. Population County: 7,100 City: 1975: 5,207	5. Form of Government Commission-Manager Form

PLANNING STATUS

6. Commission/Office - Date established 10/17/55	7. Plan in effect - Date 10/17/55
8. Plan pending	9. Type of plan Comprehensive
10. Scope of plan City-wide	11. Assistance obtained Chambers & Campbell, Albuquerque
12. Plan written by 1st Plan: Chambers & Campbell 2nd: Up-date: SRG/COG	
13. Other (specify)	

ZONING STATUS

14. Zoning authority Zoning Board	15. Date zoning authority established 5/22/45
16. Date zoning established 5/22/45	17. Type of zoning Residential, Commercial Agricultural now Transitional
18. Zoning follows planning Yes	
19. Other (specify)	

Planning and Zoning Boards were combined into Planning & Zoning Board

OTHER CONTROLS, CODES, AND ORDINANCES

20. Official Map Yes	21. Building Code Adopted Uniform Building Code
22. Housing Code Yes	23. Subdivision Regulations Yes
24. Sign Control Yes	25. Dumps, junkyards Yes
26. Other (specify)	

27. BLM District Las Cruces	28. Resource Area	29. Planning Unit
30. BLM Acreage 878,494	31. BLM Acreage as percent of total in county 31.7%	
32. Local contacts for Planning and Zoning Status Charles Kimball, Vice Chairman		
33. Remarks 605 Sims, Truth or Consequences, N. M. 87901		

GPO 152-871

Prepared for the City of Truth or Consequences
605 Sims
Truth or Consequences, New Mexico 87901 Tel. No. 894-2672

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAY 31 '73

LAND USE PLANNING AND ZONING BY LOCAL GOVERNMENT CHECKLIST

1. County <i>Otero</i>	2. City or Town <i>Blanco y Arriba</i>
3. Classification <i>City</i>	
4. Population <i>approx. 32,100</i>	5. Form of Government <i>City Manager</i>
PLANNING STATUS	
6. Commission/Office - Date established <i>1-10-67</i>	7. Plan in effect - Date <i>1-10-67 1971</i>
8. Plan pending	9. Type of plan <i>City Comprehensive Plan</i>
10. Scope of plan <i>City Comprehensive Plan</i>	11. Assistance obtained
12. Plan written by <i>McMurry & Assoc.</i>	
13. Other (specify)	

ZONING STATUS

14. Zoning authority <i>Building Official</i>	15. Date zoning authority established <i>1-10-67</i>
16. Date zoning established <i>1-10-67</i>	17. Type of zoning <i>Residential - Business District - Commercial + Industrial</i>
18. Zoning follows planning <i>yes</i>	
19. Other (specify)	

OTHER CONTROLS, CODES, AND ORDINANCES

20. Official Map <i>Revised 10/74</i> <i>Frank Collins Associates</i>	21. Building Code <i>Uniform Bldg. Code</i>
22. Housing Code <i>Uniform Housing Code</i>	23. Subdivision Regulations <i>Chapter 16 - Municipal Code</i>
24. Sign Control <i>Sign</i>	25. Dumps, junkyards
26. Other (specify)	

27. BLM District <i>Las Cruces</i>	28. Resource Area	29. Planning Unit
30. BLM Acreage <i>none in City Limits</i>	31. BLM Acreage as percent of total in county <i>unknown</i>	
32. Local contacts for Planning and Zoning Status <i>Juanita Najera Bldg Official</i>		
33. Remarks		

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

LAND USE PLANNING AND ZONING BY LOCAL GOVERNMENT CHECKLIST

MAY 25 '70

1. County <u>Hidalgo</u>	2. City or Town <u>City of Lordsburg</u>
3. Classification	
4. Population <u>3004</u>	5. Form of Government <u>Mayor/Council</u>

PLANNING STATUS

6. Commission/Office - Date established <u>5/9/68 by ordinance</u>	7. Plan in effect - Date <u>none</u>
8. Plan pending <u>none</u>	9. Type of plan
10. Scope of plan <u>Comprehensive</u>	11. Assistance obtained
12. Plan written by <u>Chambers and Campbell, Albuquerque</u>	
13. Other (specify)	

ZONING STATUS

14. Zoning authority <u>none</u>	15. Date zoning authority established <u>none</u>
16. Date zoning established <u>none</u>	17. Type of zoning <u>none</u>
18. Zoning follows planning <u>none</u>	
19. Other (specify)	

OTHER CONTROLS, CODES, AND ORDINANCES

20. Official Map <u>yes</u>	21. Building Code <u>yes</u>
22. Housing Code <u>yes</u>	23. Subdivision Regulations <u>no</u>
24. Sign Control	25. Dumps, junkyards <u>no</u>
26. Other (specify)	

27. BLM District <u>Las Cruces</u>	28. Resource Area	29. Planning Unit
30. BLM Acreage <u>303,451</u>	31. BLM Acreage as percent of total in county <u>30%</u>	
32. Local contacts for Planning and Zoning Status		
33. Remarks		

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAY 4 '78

LAND USE PLANNING AND ZONING BY LOCAL GOVERNMENT CHECKLIST

1. County Dona Ana	2. City or Town Las Cruces
3. Classification Municipality	
4. Population 48,000 plus	5. Form of Government Commission/City Manager

PLANNING STATUS

6. Commission/Office - Date established latest - Planning & Zoning earlier 1969	7. Plan in effect - Date 1969
8. Plan pending Being updated now	9. Type of plan Comprehensive
10. Scope of plan Comprehensive	11. Assistance obtained HUD Funding
12. Plan written by Harland Bartholomew & Associates	
13. Other (specify)	

ZONING STATUS

14. Zoning authority City Commission	15. Date zoning authority established 1969 latest
16. Date zoning established About 1928, latest in 1969	17. Type of zoning Euclidian
18. Zoning follows planning	
19. Other (specify)	

OTHER CONTROLS, CODES, AND ORDINANCES

20. Official Map Yes Zoning	21. Building Code Yes VBC
22. Housing Code Yes VBC	23. Subdivision Regulations Yes
24. Sign Control Yes VBC	25. Dumps, junkyards Yes
26. Other (specify)	

27. BLM District Las Cruces	28. Resource Area	29. Planning Unit
30. BLM Acreage	31. BLM Acreage as percent of total in county	

32. Local contacts for Planning and Zoning Status Director of Planning, Drawer CLC, Las Cruces, NM, or (505) 526-0320
33. Remarks

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

LAND USE PLANNING AND ZONING BY LOCAL GOVERNMENT CHECKLIST

1. County <i>Lincoln County</i>	2. City or Town
3. Classification <i>C</i>	
4. Population <i>10500</i>	5. Form of Government <i>County Commission</i>

PLANNING STATUS

6. Commission/Office - Date established <i>1972 - Planning Planning</i>	7. Plan in effect - Date
8. Plan pending <i>✓</i>	9. Type of plan <i>Sub-Division Regulation</i>
10. Scope of plan <i>S.D. Regs only</i>	11. Assistance obtained <i>701 Planning Grant</i>
12. Plan written by <i>County Engineer + P&Z Commission</i>	
13. Other (specify)	

ZONING STATUS

14. Zoning authority <i>Extra-territorial</i>	15. Date zoning authority established <i>1978 Jan.</i>
16. Date zoning established <i>1-78</i>	17. Type of zoning <i>Comprehensive</i>
18. Zoning follows planning <i>yes</i>	
19. Other (specify)	

OTHER CONTROLS, CODES, AND ORDINANCES

20. Official Map	21. Building Code <i>State</i>
22. Housing Code <i>State</i>	23. Subdivision Regulations <i>yes</i>
24. Sign Control	25. Dumps, junkyards <i>State Regs</i>
26. Other (specify)	<i>But local operated (6)</i>

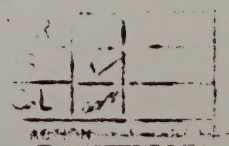
27. BLM District <i>Las Cruces</i>	28. Resource Area	29. Planning Unit
30. BLM Acreage	31. BLM Acreage as percent of total in County	

32. Local contacts for Planning and Zoning Status

33. Remarks

APR 25 '78

Mary A. —



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAY 5 '78

LAND USE PLANNING AND ZONING BY LOCAL GOVERNMENT CHECKLIST

1. County Grant	2. City or Town Silver City
3. Classification	
4. Population 9,464	5. Form of Government Municipal

PLANNING STATUS

6. Commission/Office - Date established February 11, 1958	7. Plan in effect - Date July 20, 1970
8. Plan pending	9. Type of plan Master Plan
10. Scope of plan Present and future planning	11. Assistance obtained
12. Plan written by Chambers & Campbell	
13. Other (specify)	

ZONING STATUS

14. Zoning authority Planning and Zoning Commission	15. Date zoning authority established February 11, 1958
16. Date zoning established May 25, 1960	17. Type of zoning Rural, Residential A and B, Commercial and Industrial
18. Zoning follows planning	
19. Other (specify)	

OTHER CONTROLS, CODES, AND ORDINANCES

20. Official Map Town of Silver City Map	21. Building Code Uniform Building Code
22. Housing Code	23. Subdivision Regulations Ordinance No. 476
24. Sign Control	25. Dumps, junkyards
26. Other (specify)	

27. BLM District Las Cruces	28. Resource Area	29. Planning Unit
30. BLM Acreage	31. BLM Acreage as percent of total in county	
32. Local contacts for Planning and Zoning Status Joseph E. Chato, Director of Public Works		
33. Remarks		

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAY 27 1974

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LAND USE PLANNING AND ZONING BY LOCAL GOVERNMENT CHECKLIST

1. County <u>GRANT.</u>	2. City or Town <u>Silver City</u>
3. Classification <u>B</u>	
4. Population <u>24,126</u>	5. Form of Government <u>County Local Govt. - Political S. A.</u>

PLANNING STATUS

6. Commission/Office - Date established <u>5/9/1974</u>	7. Plan in effect - Date <u>5/9/1974</u>
8. Plan pending	9. Type of plan <u>Comprehensive plan for development</u>
10. Scope of plan <u>overall plan for development.</u>	11. Assistance obtained <u>Southwest Council of Govts</u>
12. Plan written by <u>James W. Harrison Director (SWCOG)</u>	
13. Other (specify)	

ZONING STATUS

N/A

14. Zoning authority	15. Date zoning authority established
16. Date zoning established	17. Type of zoning
18. Zoning follows planning	
19. Other (specify)	

OTHER CONTROLS, CODES, AND ORDINANCES

20. Official Map <u>yes</u>	21. Building Code <u>use state code</u>
22. Housing Code <u>use state code</u>	23. Subdivision Regulations <u>yes</u>
24. Sign Control <u>use state regs</u>	25. Dumps, junkyards <u>yes</u>
26. Other (specify)	

27. BLM District <u>Las Cruces</u>	28. Resource Area <u>Gila National Forest</u>	29. Planning Unit <u>Commission</u>
30. BLM Acreage <u>1,270,277</u>	31. BLM Acreage as percent of total in county <u>50.0</u>	
32. Local contacts for Planning and Zoning Status <u>County Manager and Director SWCOG.</u>		
33. Remarks		

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

LAND USE PLANNING AND ZONING BY LOCAL GOVERNMENT CHECKLIST

1. County LUNA COUNTY	2. City or Town DEMING, NEW MEXICO, COUNTY SEAT
3. Classification CLASS C COUNTY	
4. Population 14,000	5. Form of Government COUNTY COMMISSION-ELECTED OFFICIALS

PLANNING STATUS

6. Commission/Office - Date established LUNA COUNTY PLANNING COMMISSION 9/7/72	7. Plan in effect - Date LUNA COUNTY COMPREHENSIVE DEVELOPMENT PLAN- 7/26/73-Updated 4/5/76
* 8. Plan pending SEE NO. 33 BELOW	9. Type of plan HUD-701
10. Scope of plan TOTAL COMPREHENSIVE PLANNING, INCLUDING LAND USE	11. Assistance obtained SOUTHWEST NEW MEXICO COUNCIL OF GOVERNMENTS, SILVER CITY, NM
12. Plan written by JAMES W. HARRISON, J.D., PLANNER IN CHARGE, SWNMCOG, SILVER CITY, NM	
13. Other (specify) ZONING AND PLANNING AUTHORITIES ARE COTERMINOUS	

ZONING STATUS

14. Zoning authority §14-20-1 NMSA (1953 Comp.)	15. Date zoning authority established 9/2/72
16. Date zoning established TO BE COMPLETED BETWEEN 7/1/78 & 7/1/79	17. Type of zoning (1) GENERAL LAND USE; (2) AIRPORT; (3) FLOOD PLAIN
18. Zoning follows planning COMPREHENSIVE PLAN WILL BE USED AS MASTER	
19. Other (specify) CONTRACT WILL BE MADE WITH SOUTHWEST NEW MEXICO COUNCIL OF GOVERNMENTS (SWNMCOG) FOR ZONING OF ENTIRE COUNTY AS SET OUT ABOVE, USING HUD 701 FUNDS	

OTHER CONTROLS, CODES, AND ORDINANCES

20. Official Map (1) FLOOD PLAIN ZONING (2) COMPREHENSIVE MAP (3) EXTRA-TERRITORIAL ZONED MAP	21. Building Code UNIFORM BUILDING CODE ADMINISTERED BY STATE OF NEW MEXICO
22. Housing Code NONE-DISTRICT V HOUSING AUTHORITY IS HOUSING AUTHORITY FOR LUNA COUNTY	23. Subdivision Regulations 12/1/73 AMENDED 11/1/75
24. Sign Control INCLUDED IN EXTRA-TERRITORIAL AREA BALANCE OF COUNTY NEXT YEAR	25. Dumps, junkyards PLAN FOR SANITARY LANDFILL CURRENTLY UNDER DEVELOPMENT
26. Other (specify) -----	

27. BLM District Las Cruces	28. Resource Area	29. Planning Unit
30. BLM Acreage	31. BLM Acreage as percent of total in county	
32. Local contacts for Planning and Zoning Status		

33. Remarks *EXTRA-TERRITORIAL ZONING CONTRACT NOW BEING IMPLEMENTED WITH SOUTHWEST NEW MEXICO COUNCIL OF GOVERNMENTS, AND ENTIRE COUNTY WILL BE IMPLEMENTED JULY 1, 1978, WITH SOUTHWEST NEW MEXICO COUNCIL OF GOVERNMENTS. Authority-Sections 14-20-2 through 14-20-2.3, NMSA (1953 Comp.) & Joint Powers Agreement Act, Sections 4-22-1 through 4-22-7, NMSA (1953 Comp.)

LUNA COUNTY BOARD OF
COUNTY COMMISSIONERS

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